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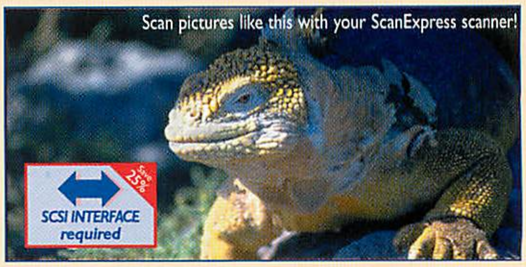
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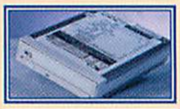
REMOVABLE SCSI DRIVES



Zip



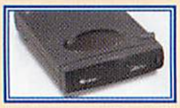
Jaz



Nomai



EZ Flyer



SyJet



PD Drive

FROM £99

ONE FREE MEDIA DISC INCLUDED

From Iomega, the **Zip** drive – a fast portable drive which uses special 100MB discs similar in size to the familiar floppy, or for high capacity try the **Jaz** with its massive 1GB discs.

Nomai 750MB. The latest removable media drive providing fast, high capacity compatible storage. It will accept a wide range of cartridges: not only its own 750MB disc but also the SyQuest 270MB & 135MB discs.

SyQuest's new high performance **SyJet** with its massive 1.5GB media gives total flexibility, plus fast transfer speeds. The **EZFlyer** uses its own 230MB cartridges, but will also accept older EZ135 cartridges. Great products from a top name.

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Zip drive in case

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- 1 year warranty
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SCSI INTERFACE required (Save 25%)

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Nomai	up to 8.8 MB/sec	750MB	£39	SyQuest 270MB & 135MB media	£229 (£269.08)	£199 (£233.83)	£259 (£304.33)
SyQuest EZFlyer	up to 2.4 MB/sec	230MB	£18	EZ 135 media	£129 (£151.58)	-	-
SyQuest SyJet	up to 7 MB/sec	1.5GB	£59	n/a	£279 (£327.83)	£229 (£269.08)	£289 (£339.58)
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A305 A310 A440 A410/1 R140 A540 R260 A3000 A5000 A3010 A3020 A4000 A4 RiscPC600 RiscPC700 A7000

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E-mail: dbscot@globalnet.co.uk
13 issue subscription rate: £39.99 (UK), £53.99 (EU), £68.99 (World)

Member of the Audit Bureau of Circulation.
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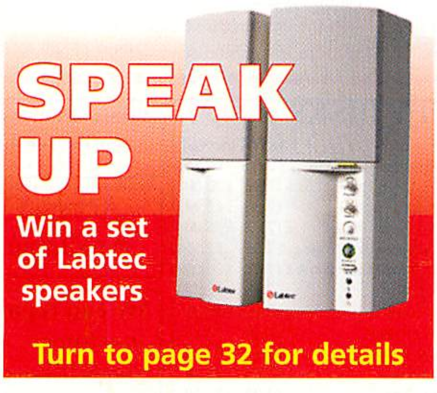
IDG MEDIA

Published by IDG Media Ltd,
Media House, Adlington Park, Macclesfield SK10 4NP
e-mail aueditor@idg.co.uk
http://www.idg.co.uk/acornuser/
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Apple Web Offset, Warrington

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Next month in Acorn User
Final part of our printer round-up, yet another printer competition plus we look at producing 3D graphics

Next issue on sale 6 August 1998

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Jaz 2Gb	£360.00	(£423.00)	£410.00	(£481.75)	£360.00	(£423.00)	£410.00	(£481.75)	£450.00	(£528.75)	£460.00	(£540.50)

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State 10base2 or 10baseT

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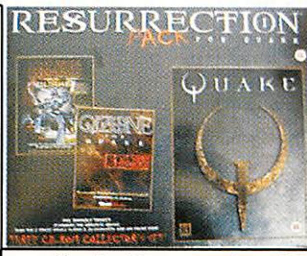
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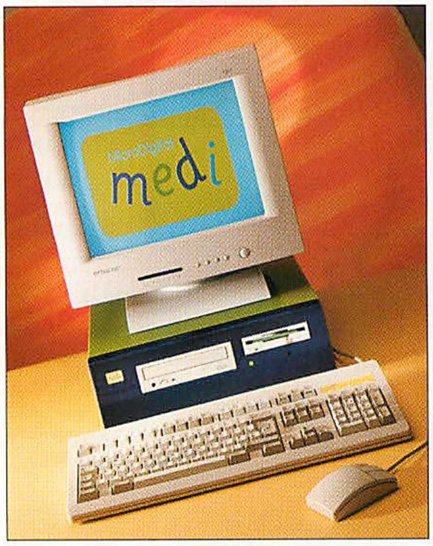
Full review
See page 24

Another Acorn-clone?

After the Peanut portable from IMS comes the Medi Computer from MicroDigital – the technical arm of the Focus IT group. Like the Peanut, the Medi's specification sounds very A7000+-like with an ARM 7500FE RISC processor clocked at 48MHz plus RISC OS 3.70.

The name sounded like Focus were targeting vertical markets in the health-care industry, but apparently the name derives from Mediterranean and is aimed at home users who may have an educational bias. Focus' David Atkins told us the Medi is meant to be warm and friendly and is finished in an unusual colour co-ordinated blue and green livery.

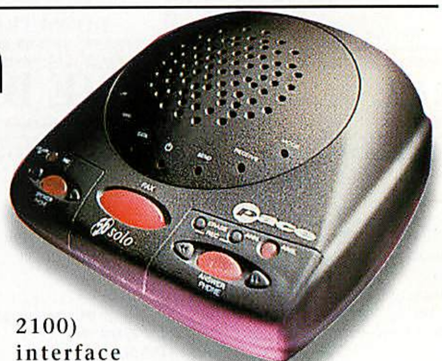
The motherboard may be Acorn-sourced, but the rest of the hardware, including the case and ancillaries, are new. Part of the marketing push behind the Medi is to woo PC users who are fed up with the short-term obsolescence in the Wintel PC market.



The Medi computer comes with 8Mb RAM, an 80Mb hard disc drive, plus the IDEFS filing system which supports drive partitions, each one of which has the ability to be attributed a different read/write status, read-only and password protection. There is also a CD-ROM drive, 8-bit internal sound-recorder with microphone, 2 slot backplane and a 15 inch digital monitor. The price is £999 excluding VAT.

Although the first generation machine is A7000+-based, MicroDigital aim to produce a second-generation machine which is almost completely built in-house, with RISC OS licensed from Acorn. More information is available from David Atkins on tel: 01274 618774 or e-mail: david@focus-it.co.uk

Innovative new modem



Modems which work even when disconnected from their host computer have been around for a couple of years, but have only become popular as prices have come down this year. Basically, these modems retain fax and telephone answering machine functions as long as they are powered up and connected to a phone line.

Faxes and voice messages are stored in the modem's own internal memory. When you power-up your computer, or in the case of a laptop – re-connect it, you regain access to the usual fax and data modem functions and you can also view or listen to any messages which have been stored.

Shipley-based PMC Consumer Electronics, which own the Pace communications products brand (PMC became a separate organisation from the Pace company famous for TV satellite receiver boxes), have taken the 'self-memory' modem a step further with their new 56 Solo model and added typical answering machine controls to the modem box itself. This means you don't even need a computer to make use of the answering machine functions.

A nice touch is that calling line identification (CLI) is built-in so you can configure the modem to tell you the incoming caller's phone number via a digitally synthesised voice. Stored faxes can be printed without the need to laboriously view them one by one on the host computer.

The device also functions as a hands-free speaker phone. The Solo 56 is a 56K class modem and PMC will soon have the latest V.90 firmware upgrade. Pricing is expected to be under £200 inc. VAT

PMC have also announced a new family of monitor-top mini-video cameras for use in applications like video-conferencing and video mail. Available in USB (not yet supported on the Acorn platform) and PCI (soon to be supported by the new Phoebe 2100) interface options, the Pace Colour Video Camera is a compact device which uses CMOS video imaging technology which is technically superior in cost and power consumption compared to conventional CCD technology.

Windows software is supplied with the cameras for face recognition and motion detection, turning your computer into an instant security device. The price is expected to be around £119 inc. VAT.

Contact PMC Consumer Electronics on tel: 0990 561001, fax: 0990 561004.

STOP PRESS

Board room coup at Acorn

As we were preparing to go to press the shock news filtered through that none other than Acorn company president (managing director) David Lee, senior vice president Peter Bondar and two other high ranking managers, Lorraine Buckman (Human Resources) and Graham Dodgson (Sales) within Acorn had resigned.

Stan Boland, moves up from being a senior vice president to replace David Lee as CEO (chief executive officer). There has been no official explanation of any substance for the resignations, however, concerns that Chris Cox's Workstations Division – which is the part of Acorn most directly relevant to *Acorn User* readers – could be affected are being refuted.

Chris Cox told *Acorn User* he is confident the new Phoebe 2100 will be launched on schedule in September. It should be noted that while Acorn are actively re-engineering themselves into a consultancy business, the Workstations Division is actually still the main revenue earner for Acorn. The issues surrounding the board changes centre around Acorn's new direction and we have heard from our sources that there was dissatisfaction in some quarters over the lack of necessary pace at which the changes were taking place.

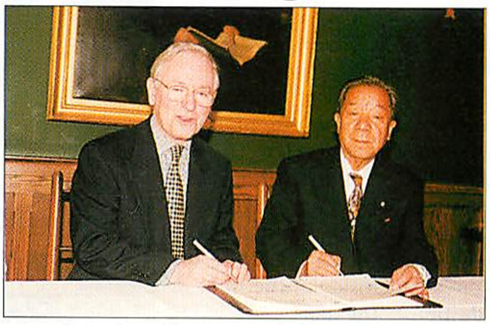
Although Stan Boland has inherited the driving seat at Acorn, our information is that he had not directly sought the position and was not expecting the resignations. Unlike when Lee replaced his predecessor, Sam Wauchope, there was no polite joint hand-over period. All those departing cleared their desks on the same day. Unfortunately, Boland was out of the country and unable to comment on the situation before we were due to go to press.

Acorn online banking

Home-banking customers of a leading, but as-yet unnamed, European bank will be depending on Acorn terminal equipment to access their on-line service in the near future. The Web-based service will be delivered via modem across ordinary phone lines. Acorn are working in partnership with the Japanese electronics firm, Funai, to develop the system.

The deal securing the partnership was recently signed in London by company founder, Mr Funai and Acorn's managing director, David Lee. Acorn senior marketing manager Alastair France, just before his new appointment as Acorn NC sales manager (see other story) commented: "This agreement with Funai is an excellent example of how Acorn and Funai can work together in partnership. It allows us to concentrate on developing technologies in Internet banking and on designing optimum Internet banking systems for this major manufacturer. By working in partnership, Acorn and Funai will be able to develop world-beating online banking systems."

One of Acorn's most visible contributions to the technology being used in the project is their anti-flicker device for displaying computer data clearly using ordinary TV screens. Text also



remains clear because of Acorn's Dynamic Horizontal Scaling (DHS) which automatically converts the image from the wide scale width of the Web to fit on a TV screen. NC-underpinnings are evident in the inclusion of a smart card ID system.

Another neat feature is an agent-based system which disconnects the phone line after a period of inactivity, only re-connecting when data needs to be transferred between it and the host computer. SSL encryption protects users from possible Internet fraudsters. Funai are a major producer of electronic equipment for a variety of markets and a key partner for Acorn's future.

Panasonic offer PD lifeline

Panasonic's proprietary PD phase-change optical disc system has always been technically interesting, but it hasn't been a huge success commercially. Phase-change is now the technology employed for re-writable CD and Panasonic's PD system combines a conventional CD-ROM drive with a 650Mb re-writable disc.



The biggest problem with PD to date has been performance, especially of the CD-ROM side of the mechanism.

Until recently, PD drives could only offer 6X CD speeds, but now Panasonic have introduced a 24X drive and also confirmed that PD cartridges will be accepted by Panasonic-brand DVD-RAM re-writable drives, for both read and write operations.

DVD-RAM will arrive in numbers later this year, but the entry-level for these 2.5Gb per side recordable CD drives will be more like £400 than the recommended £269 + VAT for the Panasonic LF-1097 PD/CD-ROM. This means there is less risk in buying a Panasonic PD drive today as Panasonic is guaranteeing PD cartridge compatibility with their own DVD-RAM drives, though Panasonic also say they don't expect rival manufacturers' DVD-RAM drives to accept PD cartridges.

The obvious alternative might be CD+RW – rewritable CD. Rewritable CDs are cheaper than PD cartridges and have a similar capacity. The problem is that DVD-RAM drives can't write to CD+RW discs.

On the other hand, all modern CD-ROM drives can read CD+RW discs, while the drives themselves can also write to the now fantastically cheap write-once CDR discs. The main message coming from Panasonic is that with the SCSI-based LF-1097 it's not yet time to write-off the PD format.

Contact Panasonic on 0500 404041.

CD changer control

Dr Charles McEvoy of Dewsbury, West Riding, has produced a utility which will be of interest to anyone lucky enough to own a 4xCD changer. The program allows a 4xCD changer to be used as a jukebox, remembering disc names and track lists and allowing tracks from any discs to be played in any order. The program is available in beta form at the website http://www.tranquility.demon.co.uk/Changer/index.html

Name change

Last month we reported that Toby Mackenzie's Bajorasoft label had produced an application to collate the Internet programs *!Browse*, *!Mail* and *!Connect*.

Toby originally called the application, somewhat optimistically, *Acorn Internet*. It would appear Acorn has had a quiet word and the result is that the software is now called *InterLink*.

For more information, contact Bajorasoft at tel/fax: 01689 877586, Web: http://www.bajorasoft.demon.co.uk

CD player omission

Yellowstone Electronic Solutions Ltd have owned up to an error in the release of the latest version of their *RapIDE* software update (version 2.29) on 15 May. They forgot to include the CD player software application. If you have been wondering what had happened to this application and would like to obtain it, the whole version 2.29 distribution download is available, complete with player, from http://www.yellowstone.co.uk/downloads.html

IMS correction

We printed an incorrect phone number for IMS in the last issue – it should have read 01934-522880. Apologies for any inconvenience caused.

Affordable high-spec monitor



Now that Acorn sensibly offer their customers the option of sourcing their own monitors on some computers, including the up-coming Phoebe 2100 flagship, even the 15 inch display category, which is rapidly being labelled as the new entry-level, is more relevant than ever for Acorn buyers. The choice is huge and the latest addition comes from Panasonic in the form of their PanaSync S50 TX-T5F69.

This is a 15 inch FST monitor with a high contrast screen and refresh rates high enough to cope with 1280x1024 resolution, according to Panasonic, though they concede the typical resolution users will set for this size of monitor is 1024x768 at refresh rate of 75Hz. A novelty in the specification is the use of a new type of phosphor, which is the layer coating the inside of the front of the tube.

The new 'crystal pigment' phosphor works together with a special anti-reflective coating on the outside of the tube to increase contrast and maintain sharpness. A 0.27mm dot pitch is not class-leading, but acceptable for this class of 15 inch monitor. MPRII and TCO'92 health and safety standards are met and there is the usual selection of digital control screen adjustment options. Perhaps the best feature is the price; just £160 + VAT, a price which is likely to be reduced by most vendors.

Contact Panasonic on 0500 404041.

New StrongARM A7000+?

An Acorn source which would normally command good credibility has reported to us that Acorn are in the final stages of preparing a new StrongARM version of the A7000. The suggestion was that Acorn's manufacturing sub-contractor has already finalised a production line and pre-production prototypes have been built.

While Acorn's Chris Cox, head of the Workstations Division, agrees that a StrongARM A7000 makes a lot of sense, he denied that Acorn were preparing such a product – certainly not in the late stages of pre-production at least. "I'm certainly not aware of it," said Cox, who pointed out that a StrongARM A7000 would introduce some RISC OS software compatibility problems for users of the current A7000 and A7000+ who are mainly in the education sector.

The idea of a StrongARM A7000 does raise some interesting questions. In September the new Phoebe 2100 will be introduced and this will put pressure on the viability of the current Risc PC. Xemplar's Luca Leonardi agrees that Phoebe will ultimately force the Risc PC out of the education market, probably some time towards the middle of next year. However, according to both Cox and Leonardi, Phoebe was not designed with much emphasis on the education market.

It has its place in schools, mainly as a high-performance stand-alone workstation, like the current Risc PC-based J-233 JavaStation. Where the Risc PC has an advantage is in its modular flexibility which means it can be packaged as a low-end offering, something Phoebe cannot. A StrongARM A7000 would eliminate the practicality of a budget-priced Risc PC.

If our source is right and an A7000-style product based on the StrongARM processor really is being prepared for production, we can only think that it must be something to do with one of Acorn's other business units. Certainly, most of Acorn's digital TV and new NC developments centre on StrongARM.

Phoebe's new friend

Chris Cox, head of Acorn's recently formed Workstation Division (they're responsible for Acorn desktop computers, consumer and vertical markets), has been rather over-worked since the beginning of the year as he has been without a marketing manager or marketing assistant. The departure of Kerri Davies at the end of last year meant Cox has had to do the work of three people.

This may be challenging, but on the run up to the launch of Phoebe, Cox can relax a bit as his new marketing manager, Suzy Wright, gets up to speed. Wright moves from Black Box, a networking products company. Nicola Lewis has also recently been appointed as marketing assistant.

Skullsoft news

Skullsoft have a new addition (*Nomen*, Version 1.00) and have released new versions of four of their current programs: *SkullCrusher* (Version 1.01), *FSPRename* (Version 1.01), *WFRP* (Version 2.04) and *JPEGTrans* (Version 1.14). All these programs require the latest version of the *WimpBasic* module, version 2.00 or later, to work, which is also available via Skullsoft's website.

SkullCrusher was previously available as a shareware archiving and compression program but Skullsoft have now changed their status to freeware.

It features three compression options (None, Squash and LZH) as well as file splitting while compressing, secure password encryption and the ability to store 'skeleton file structure' or directories and applications only. The new version, 1.01, fixes many bugs that where present in the last version.

JPEGTrans is a front end for the 'Jpegtran' utility. It allows you to create progressive and/or optimised JPEGs from JPEG compressed images. This new version, 1.14, is mainly a bug fix release.

WFRP is a role-playing games character generator for HogsHead Publishing's *WFRP* game. This new version, 2.04 is mainly a bug fix from the previous version, but adds one or two minor new features.

Another bug fix release is *FSPRename* 1.01, the file renaming utility for sprites specifically designed for animation in Andy Southgate's Gamesuite library. Finally, there is *Nomen*, an early version of a new filename tidying program. It can cope with long filenames and strip DOS extensions.

E-mail: skullsoft@eganc.demon.co.uk, Web: mailto:skullsoft@eganc.demon.co.uk

New lower prices on printers and RAM

Canon

0325 Canon BJC620	£212.97
0430 Canon BJC4300	£141.00

Epson

0464 Stylus Colour 400	£158.63
0398 Stylus Colour 600	£217.38
0399 Stylus Colour 800	£293.75

Brother laser

7551 Brother HL760 5Mb	£376.00

RAM prices

	Risc PC	*A7000+*
8Mb	**£21.00**	**£25.00**
16Mb	**£29.38**	**£29.38**
32Mb	**£50.00**	**£64.63**

Memory prices are constantly changing - please ring for latest. Carriage on printers / computers £11.75; carriage on software/RAM £2.20. Feel free to phone for a quote before ordering.

We have a new series of retail updates available - call now and ask for your copy; detailing everything from games to hard drives!

New Software from Beebug

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Code: PHAN

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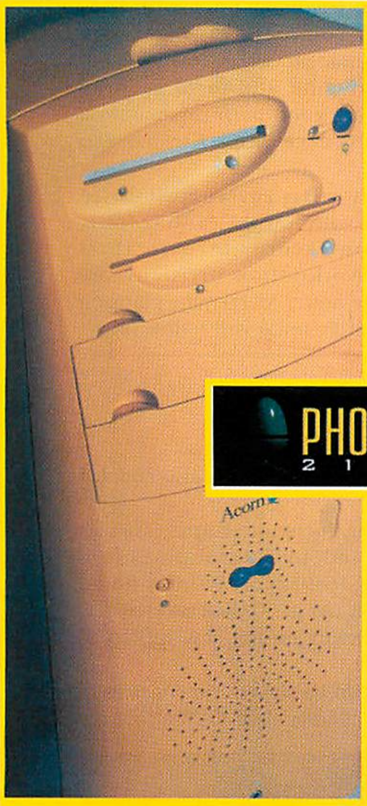
Sleuth 3

Code: 0079

The latest version of the OCR package for Acorn RISC computers. **£151.57**

Call for full information including upgrades.

The *new* Acorn for the millennium



The challenge

This is the new Acorn workstation developed to supersede the phenomenally successful Risc PC. Phoebe builds on the strengths of the Risc PC and has new features to provide superb performance and upgrade flexibility.

- Full potential of StrongARM is harnessed
  - Support for several StrongARMs
  - PCI support
  - Updated I/O to modem standard
  - Best possible graphics performance
  - Enhanced RISC OS functionality *(RISC OS 4 includes support for long filenames, less complex !Boot sequence, enhanced configuration options).*
- Existing RISC OS applications will run

New case (as opposite)

This new case builds on all of the good points of the existing design and includes many more:

- 3 podules
- 4 Built-in PCI sockets
- 230W PSU
- No screws required to access
- Peripherals are separate from the main system
- New EIDE hard disc interface for up to 4 drives

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If you'd like to reserve your place in the quéue, complete the form below and return it to us as soon as possible. The deposit of £100 will be banked, and the balance (£1399 + VAT without monitor, £1619 + VAT with monitor) will be due when the machine is released (around September).

A new finance scheme - 0% finance over six months, will be introduced allowing for easy payments and, with every Phoebe, we'll give Sleuth 2 OCR, and an extra 32Mb of RAM.

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All prices and specifications are subject to change without notice. E&OE.

New Smalltalk

Squeak, a RISC OS port of the object-orientated programming language called *Smalltalk*, has reached version 2.0 and is now available for Acorn machines with RISC OS 3.7 or later. *Squeak* can be downloaded from http://sumeru.stanford.edu/tim/pooters/squeak.html and is about 3Mb, expanding to about 10Mb on disc.

A minimum of around 6Mb of free memory is recommended in order to run *Squeek*. This latest version adds hotkey support, but still lacks sound and serial port access.

Tim Rowledge (rowledge@interval.com or tim@sumeru.stanford.edu) is developing *Squeak* and is happy to receive any suggestions and help.

Beebug take on Phantasm

The *ArtWorks* add-on, *Phantasm* produced by Astute Graphics, will now be exclusively sold by Beebug in single user form. Astute, which did not have credit card sales facilities, will now be left to concentrate on *Project Avante*, which aims to replace *ArtWorks* as the leading RISC OS drawing package. *Phantasm* will continue to be sold at the current price of £17.50 inc VAT. Astute's website is at http://www.astute-grfx.demon.co.uk/

Even stronger help

The latest version of *StrongHelp* is now available in beta form. The major change in this version is to make it easier to organise multiple manuals in the *!Manuals* directory.

Instead of just having them as one long list, you can now organise them in sub-directories. This will be reflected in the *StrongHelp* root page and in the way you select manuals to search in the free-text search window. *StrongHelp* 2.60 is available via the Web at http://home.eunet.no/~guttorvi/strong.html

Sub-$200 reference design

Acorn have announced a thin client reference design based on the Citrix ICA model with what Citrix describes as a groundbreaking end-user price estimated at $199. Acorn's DeskLite reference design is designed to work with Citrix WinFrame and MetaFrame servers.

Put simply, Acorn have come up with a £130 box which, with a monitor, mouse, keyboard and network connection, will deliver a Microsoft Windows environment to its user served up by a central Windows NT server machine. Metaframe is the new Citrix server compatible with Microsoft Windows NT Server 4.0-based Windows Terminal Server Edition.

Acorn plan to offer the DeskLite information appliance to computer and consumer electronics manufacturers to serve as the fundamental hardware base of low-cost, low-complexity devices for accessing information and applications across networks. Acorn expect information appliances based on the DeskLite reference design to be available in early 1999.

"Thin-client/server computing provides a bridge to the future of computing by transforming the network into the heart of the system and the client into a simple device that can be as interchangeable and maintenance free as a telephone," said Edward Iacobucci, Citrix chairman and chief technical officer. "The result is the emergence of ubiquitous computing, as evidenced by Acorn's DeskLite reference platform, that delivers broadened information access to thousands of new and existing applications and reduces the cost and complexity of computing, so more people and organisations around the world can reap the benefits of information technology."

The DeskLite is based on ARM7500FE processor and includes a parallel printer, monitor or optional TV connection, 10BaseT network or dial-up modem, 16-bit audio and connections for keyboard and mouse. The DeskLite is designed to be connected to WinFrame or MetaFrame servers via Citrix' ICA protocol across almost any network infrastructure, from Ethernet to standard telephone lines, with LAN-like performance. You may think network performance over a modem is akin to a joke, but clever data compression and local caching endowed a surprising good performance on a prototype Acorn Citrix client *Acorn User* has seen working.

Xemplar currently offers an Acorn NC-based solution compatible with just the existing Citrix WinFrame solution. Acorn, in both their Consultancy and Workstation Divisions, are concentrating on the newer MetaFrame platform and it's expected that Xemplar will follow suite.

Ancestry author dies

Last month we ran a routine news story which reported that Graham Crow was to update and enhance the *!Ancestry* genealogical software package which was formerly marketed by Minerva Software. He probably never saw the news item as, without warning, Graham died of a massive stroke in the first week of June.

Ancestry was his main claim to fame in the Acorn world, but he was also responsible for titles like *!MenuBar*, *!Tiger* and others. He penned a unique award-winning poem which also doubled as a Basic program.

Friends of Graham, including Patrick Thomas (tel: 01600-750444) and *Archive* magazine's Paul Beverley (tel: 01603 766922) are keen to find a programmer to finish the job Graham was apparently close to completing on the new version of *Ancestry*.

Acorn User passes on its sincere condolences to Graham Crow's wife, Barbara and the family.

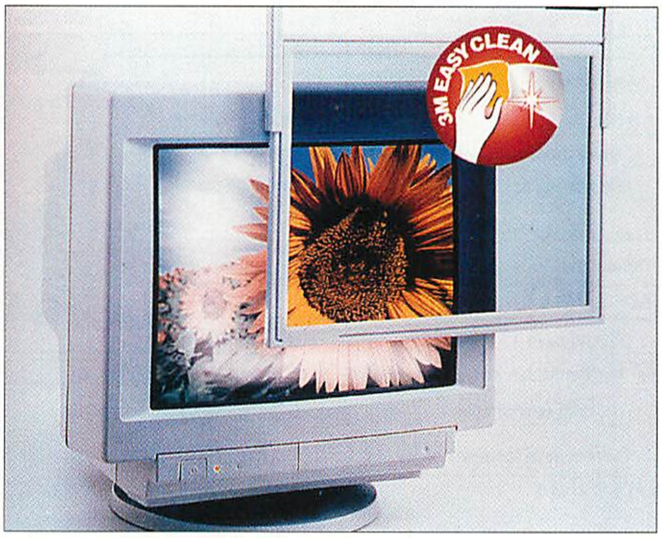
New NC sales manager

A very familiar face at Acorn, Alastair France, has been appointed sales manager in charge of Acorn NC sales. This is the Acorn Workstations Division's push to get NCs into vertical markets and tertiary education. Xemplar are also pushing Acorn NCs in education, but their sectors are Primary and Secondary schools.

France is an Acorn stalwart, having been with the company for 12 years, previously being an area sales manager and also working with some of Acorn's foreign partners in international sales. "The Acorn NC is entering an exciting era," commented France, adding: "Sales into our target markets are increasing dramatically, enabling more users than ever before to access information in the Internet. A user will be able to simply walk up to a public access computer and log in by inserting their smart card."

Among Acorn's targets in the NC market are businesses within the National Health Service. On the international front, Acorn recently concluded a marketing tour of Australia and New Zealand to promote the NC. Although Acorn were one of the first to deliver NC client hardware, Acorn have now decided they need a server component in order to be able to offer a complete solution. This will be a Microsoft Windows NT-based server box running the new Windows Terminal Server system in conjunction with Citrix thin client software.

Mark-resistant monitors



Modern monitors are largely safe to use as supplied, but add-on monitor filters are still very popular with users to reduce glare and improve contrast. The main problem with these filters is that they are, according to one of the biggest filter makers, 3M, vulnerable to smudges and fingerprints which are very difficult to shift.

3M's new monitor filter range features a new 'Easy Clean' coating which is guaranteed to wipe clean with a damp cloth. This saves on expensive monitor cleaning wipes and fluids. Full details on 3M monitor filters are available via Tel: 01344 858806.

Cumana drive developments

Cumana have introduced some new drivers for their disc storage products, a parallel port PD drive and a new Acorn native recordable CD writer package The latter is called *!CDBlaze* and this supports multiple CD+RW drives, complete ISO 9660 Joliet file system support, integrated drag and drop, multiple sessions (including appending data to existing session) as well as a "Write on the Fly" feature for creating large ISO image files.

!CDBlaze currently supports the following recordable CD drives: Panasonic 7502, Plasmon CDR480 and CDR 481, Ricoh MP6200s and the Philips CDD2600. Cannon are working to add further drive models. The software is priced £79.99 + VAT

Cumana have introduced a version of Panasonic's PD/CD drive in parallel port form, which extends their existing "ProTeus" PD range. Although this drive has a modest 6X CD speed capability, as it's a parallel port drive, the extra speed and expense of Panasonic's new 24X drive (see elsewhere this month) would be largely wasted. The drive has a 160ms access time for CDs and 125ms for PD discs. The drive is priced £299 + VAT. Extra PD cartridges are priced £26 + VAT.

Finally, Cumana have released new RISC OS drivers for SyQuest's new 1Gb SparQ removable hard disc drive. Currently, Cumana are only supplying the parallel port version of this drive, but an IDE version is in the pipeline. A SparQ drive with one disc is priced £199 + VAT and extra discs are £35 + VAT each.

Contact Cumana on 01279-730900 or fax: 01279-730809.

New products/upgrades

Product	New features/product details	Price	Contact
!NewSaver	* Makes process of saving and cataloguing of files and progs quick and easy * Fully configurable * Operates over a network * Originally designed for Special Needs (My World) but now can be used with any app for any age and ability as well	£29 inc VAT	ECS (Nottingham) Ltd 2nd Floor, 107 Carlton Road Nottingham NG3 2FB WWW: http://www.innotts.co.uk/~ecsltd/
Earth in Space CD	* Major review of CD containing data about the solar system, moons, planets and stars. * Now more than 220Mb of data	Now £9.90 inc VAT and UK carriage. For upgrade return CD and case plus £5.	APDL 39 Knighton Park Road Sydenham London SE26 5RN Tel: 0181-778 2659 E-mail: info@apdl.co.uk
Generation Design games compilation CD improved	* An extra game - Gold Run - added to the six game CD	£16.50	As above
Datafile software transfer	* Now available from APDL * Some price reductions on games and CDs		As above

Epson license ARM7TDMI

Seiko Epson Corporation, or just plain Epson to most, have licensed the ARM7TDMI, the compact 'Thumb' version of the ARM7 family. Epson board director and general manager of the Semiconductor Operations Division, Nobuo Hashizume, explained: "I'm very pleased that we are entering into a licensing agreement with ARM. We plan to utilise ARM's outstanding RISC core technology in our system-on-a-chip business for the rapidly expanding portable telecommunications market. By adding Epson's 'Energy Saving' technology program, we believe we can create distinctive products to meet our customers' needs." So watch out for ARM-powered mobile phones and possibly watches from Epson in the not too distant future.

Make your Acorn delirious

Delirium is a new Risc PC screen-saver from Kulture, using demo-style effects. *Delirium* has been developed over a number of years but never quite finished. After a recent surge in updating work for the Risc PC and the development of lots of new Risc PC savers it has finally been released. Apparently *Delirium* takes screen-saving beyond sliding blocks and virtual fish tanks.

It uses demo-quality special-effects harnessing the full power of the Risc PC's 24-bit graphics and multi-tasking. *Delirium* can be downloaded via the Web at http://www.various-artists.demon.co.uk/delirium/ and the authors can be contacted via delirium@various-artists.demon.co.uk. A Risc PC with VRAM is required to run *Delirium*, and a StrongARM is recommended.

Exodus winners

The five lucky winners of our Exodus competition are: Mr Chris Murray (Hants), Mr M Robinson (Middlesborough), Jamie Goodliffe (Chesterfield), W Grdemier (Netherlands) and Mr M Jones (Chester). Congratulations – you'll be receiving your copy of *Exodus* from Artex Software soon.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

QuickSort

Sorting routines are an essential part of many programs and whether you're putting polygons into the right order or rearranging a database, you usually need to do it quickly. Writing a good sort routine can also take quite a bit of time in itself, so why not use Gareth McCaughan's improved sorting routine?

Gareth has released his updated C *Quicksort* routine with full source code so you can drop it straight into your programs after checking out just where he's getting the extra speed from. The source includes notes on implementation and a list of improvements over the standard C library *Quicksort*, as follows: "Median-of-three pivoting (and more), Truncation and final polishing by a single insertion sort, Early truncation when no swaps needed in pivoting step, Explicit recursion, guaranteed not to overflow and separate code for non-aligned/aligned/word-size objects." You can find *QuickSort* on Arcade BBS.

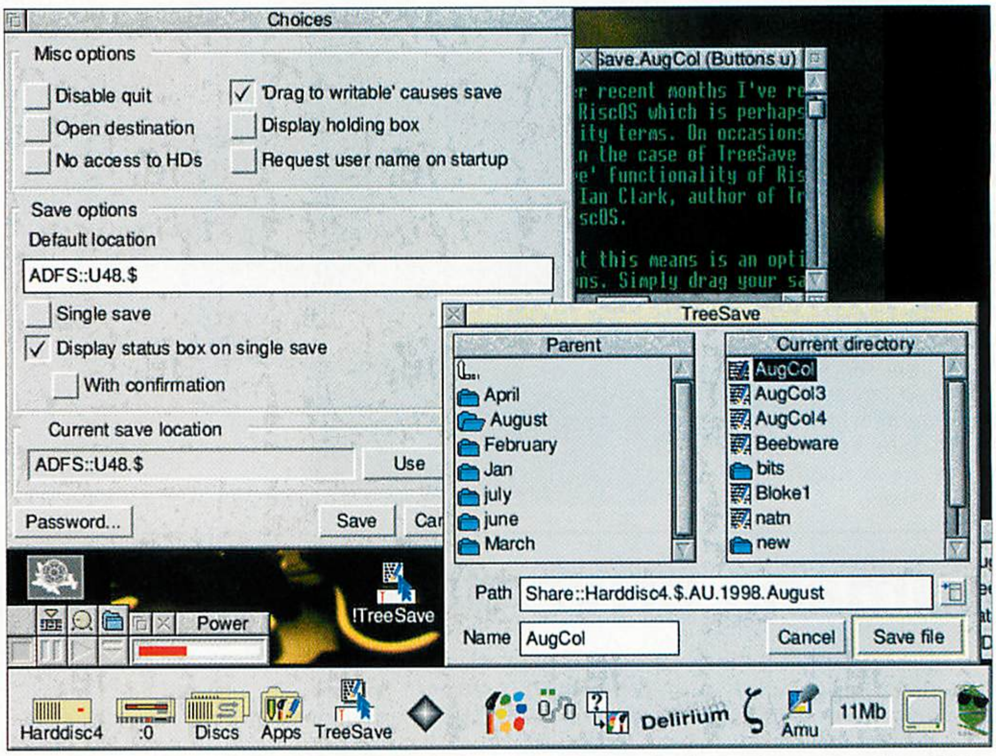
ArtToSpr

ArtToSpr by Tony Houghton converts *ArtWorks* or *Draw* files to Sprites. Not an essential utility given the ease with which you can display some vector art and then screen grab it, but it can come in handy in some situations. You can scale to fit precise OS unit sizes and of course produce sprites that wouldn't actually fit on the screen enabling you to take a snapshot of them. *ArtToSpr* can be found on Arcade BBS.

Recommended PD Libraries

- APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

TreeSave



Over recent months I've reviewed several utilities that add Windows 95 style functionality to RISC OS. This is perhaps a little strange given the superiority that RISC OS holds over its Microsoft rival in usability terms. On occasions however, there are tips that can be picked up from those 'evil' PCs. In the case of *TreeSave* though, I'm not so sure. I've always found the 'drag an icon to a filer window to save' functionality of RISC OS to be so much easier and more usable than the Windows method. Ian Clark, author of *TreeSave* doesn't agree as his program adds the Win95 save method to RISC OS.

What this means is an optional save style that can be used from all standard RISC OS applications. Simply drag your save icon in your save dialogue box to the writable icon at the bottom of the box and *TreeSave* opens its Win95 style save window. You can type in a filing path or filing system and then navigate around the directory structure using two icon lists of directories.

Whether you like this method of saving files or not (and personally, as you can probably tell by now, I'm not a big fan), there are a few limitations over the real Win95. To begin with, you can't step back past the root to a list of filing systems. When I tested the program, it kept defaulting to the floppy drive which meant I had to type in the name of my hard disc or go through the Select FS menu before I could browse to find the right directory. This basically takes you back to a Windows 3.1 level of annoyance. I certainly don't want to go there.

It would also be a little easier if a double-click in the left icon list box made a jump straight to that directory rather than you having to move across to the other list box to click there, as you can in Win95. There's also the window plotting problem which makes half the window disappear when you drag it with the right mouse button. Not a major problem, but it really needs to be tested and bug fixed properly.

I do like the way the program is transparent. It doesn't add extra buttons which could cause no end of problems on some save boxes. But with the minor niggles in the implementation it still isn't very usable, even if you do like the overall idea. With some more work however, this could be a handy addition to your Boot sequence. *Treesave* can be found on U48 from Five Star PD. Contact Ian Clark at rooster@cat1.demon.co.uk

Divine Nation

With Revelation '98 in sight, a new demo crew are on the scene and working to make their mark. Divine Nation are a UK-based group of five members, who will be releasing their first demo, *Eden*, at the Revelation 98 competition. Other than a number of unusual screen shots of *Eden* on the website, little more is known about the group, but I'll be investigating more for the next issue. The Divine Nation website can be found at http://www.page-designer.com/dn/ and the group can be contacted at dn@page-designer.com

Datafile closure

It's with great sadness that I pass on the news of the closure of the Datafile PD library. The surge in interest in the Internet has left many PD libraries out in the cold in recent years and Datafile proprietor Dave McCartney has finally decided to call it a day.

The library itself will live on as part of APDL which is the last of the big libraries of yesteryear. Dave intends to continue to trade commercially under 'The Classic Font Company' banner and will continue to release the classic Datafile PDCD series. For me personally it's quite a strange idea to have the PD scene and no Dave Mc.

Dave was my first contact on the scene many years ago before I started writing for *Acorn User* and he did a lot to encourage my interest in writing PD software and getting involved in the PD scene. Seeing Dave's library close is a great loss to the world of PD, but I think I speak for thousands of Acorn PD fans when I thank him for all the work he's put into the Datafile and wish him all the best for the future. Don't be a stranger, Dave.

Beebware

More bad news on the PD library front with the announcement of the permanent closure of Beebware PD. The owner Richard Chiswell is closing the library to concentrate on Beebware's core business which is, as Richard describes it "the provision of RISC OS software and Internet services." However, with the launch of the new Beebware website, a small selection of PD will be available for download from http://www.beebware.com and will include a range of links to good download sites on the Net.

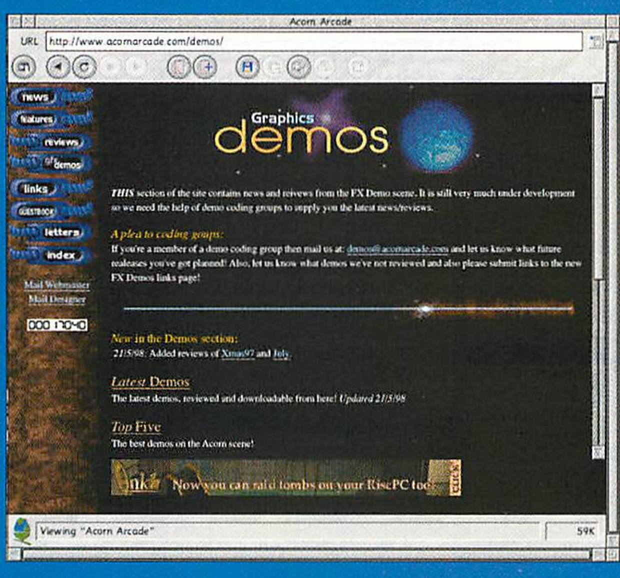
Following the discussions on central PD download sites in recent issues, Tim says that Beebware are also considering starting a similar service. As he describes, "Acorn programmers (not just PD or shareware) can register their program on our database... the program itself is held on the author's own website (or, if necessary our own) and a link is made to the site. The author then either e-mails our automatic mailing system or fills in a form on our website which then updates the database and e-mails anybody who wanted to know when the program is updated." For more information check the website at http://www.beebware.com/ roarchive/

It's great to see so many people interested in the idea of this kind of site, but it's only going to work if someone gets the design and workings of the idea right and it's supported by all the PD authors out there. Let's hope a quality leader emerges...

Acorn Arcade

The Acorn Arcade website has recently been expanded to incorporate a completely new demos section, featuring news, reviews and all the latest stories. As is always important with anything demo related, the design is good although most of the sprites will be familiar to TXP demo fans.

The content is also excellent with the reviews being accurate and direct. It's very much a demo watchers site and could really do with the input of a coder or two to give it more of a demo feel. This was done very well in Icebird's Coders Revenge disc mag. Other than that, it's a very nice site and well worth a look.



Keep up the good work guys. Check the Demo section of Acorn Arcade at http://www.acorn-arcade.com/

VOTI

Nathan Atkinson, head honcho of Visions of the Impossible informs me of a change in the group website which now resides at http://www.geocities.com/SiliconValley/Campus/3873/ As well as news from the group you'll find downloadable gems like the tasty *StuntRacer 2000 Track Editor*. Following the recent "merger" with Paul Thompson's DFI group (see recent 3D series in *Acorn User*) VOTI are certainly one of the groups to watch.

Another man with an impressive line in graphics code is *Drifter* coder, Andrew Docking. If you frequented the Acorn stand at the Wakefield show on Saturday afternoon you'll have seen a whole range of us crazy coders drooling over Andrew's recent work. As well as a stylish new game he's also got a range of 3D tools under development. Watch this space for all the latest moves in the graphics scene.

Performance

ARpM is a vehicle simulation model by Terry Duell of Victoria, Australia. As Tony describes "*ARpM* allows examination of the effect of powertrain (engine, transmission, final drive) characteristics on the performance of the vehicle, as well as the effects of rolling resistance, mass, aerodynamic drag, inertia, road surface, traction and so on.

ARpM is a serious tool, using algorithms developed by professional engineers with many years of experience in vehicle engineering." *ARpM* is a heavy duty simulator that could be very useful in the educational field of Engineering and Physics. Performance can be found on disc PR25 from Five Star Marketing.

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to aupdpage@idg.co.uk

Showroom open Mon-Sat 10-18.00 hrs **(All prices INCLUDE VAT)** Carriage not included

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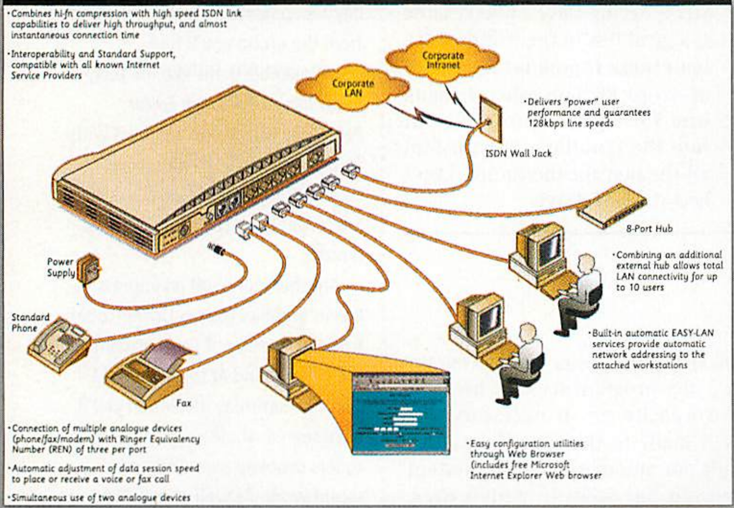
This *amazingly easy* to use unit is suitable for RiscOS, PC, Mac & Unix computers and compatible with BT ISDN/HomeHighway services. It provides;

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233MHz StrongARM now fitted to all RiscPC Computers.

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A7000+ 8MHD1.2Gb	£925	£1160	£785
A7000+ 8MHD1.2Gb+8xCD	£975	£1210	£835
A7000+ 8MHD1.2Gb+24xCD	£995	£1230	£855
RiscPC StrongARM 4MHD1.7Gb	£1039	£1274	£899
RiscPC StrongARM 4MHD1.2Gb+8xCD	£1079	£1314	£939
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J233 RPC incl. J233 Internet software pack & int'l modem (avail. now)

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We are taking advance orders now. A deposit of £100 is required which is registered with Acorn Computers Ltd.

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- Lock/unlock zip/jaz discs with/without passwords
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- Low Level format zip/jaz discs.
- Initialise zip/jaz discs for RiscOS or DOS.
- Unprotect the Tools disc

New Software Releases

DOOM Trilogy for RiscOS £30a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Syndicate+ for RiscOS £27a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Ankh for RiscOS £23a
- RiscOS >3.1 with 4Mb RAM, VGA & CD-ROM

Frak for RiscPC £14a
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Samsung 14" Monitor £130
FST, 0.28" dp, 1024x768, 30-54kHz & pre-sets.

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Following prices strictly whilst stocks last.

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64Mb £130a | 128Mb £Calla

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Call for details of memory for other models.

Hard Drives/Interfaces+

Carr.: a=£2, b=£6, c=£8

Hard Drives

Quantum 2.1Gb IDE £105b
Quantum 4.3 Gb IDE £140b
IBM 540Mb SCSI £120b
Cheetah 4.5Gb SCSI £520c
Cheetah 9.1Gb SCSI £830c
10,000rpm Cheetah drives useful for VideoDsk

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Simtec IDE Interface £69
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Cumana SCSI II £155

CD-ROM Drives

Internal CD-ROM Drives

Panas'c 24xCD **ATAPI** £60c
Toshiba 32x CD **SCSI** £100c
Cable & Fitting Kit £10a
Compatible with RiscOS 3.60 or greater.

External CD-ROM Drives

Panas'c 24xCD **ATAPI** £120c
Toshiba 32x CD **SCSI** £160c
External Drives require a suitable Data cable.

I³ Networking (Carr. £6)

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Archi EtherLan 514 £130
RPC/A7k EtherLan 602 £110
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RiscPC Upgrades

RiscOS 3.70 Upgrade £58a
- Above is suitable for RiscPC's only.
233MHz StrongARM £275b
586-133 PC Card (512kb) £360c
PC Pro (without PCExchange) £38a
Windows '95 CD (Full) £90a
Can be installed without any prev PCOS pres't
2nd Slice with PSU £116c
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YES 16 bit Mozart Card £70a

Printers (Carriage £8)

Canon BJC-4300 £140
Canon BJC-4550 (A3) £250
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Canon BJC-620 (720dpi) £220
BJC-7000 (1200x600dpi) £295
Epson 400 (720dpi, 3ppm) £149
Epson 600 (1440x720dpi) £199
Epson 800 (1440x720dpi) £270
HP LaserJets 6L (6ppm) £295
HP LaserJets 6P (8ppm) £585

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Int SCSI zip drive £115c
Ext SCSI zip drive £115c
Ext Parallel zip drive £115c
- add £29 for RiscOS Parallel Driver
100Mb zip cartridge £11a
Pk of 6 zip discs+caddy £65b
Int 1Gb jaz drive (3½") £220c
Ext 1Gb jaz drive £260c
1Gb jaz cartridge £70a
Carriage: a = £2, b = £6, c = £8, d = £10

Modems (Carriage £8)

Budget 56kVoice Modem £95
Pace 56k Voice (Flash) £140
Pace 56k Solo (Flash) £190
- The Solo modem can save fax & voice
- messages without a computer attached!
Modems come with a 9-25 PC wired cable. A3000/Archimedes req'r an Archi wired cable.
ANT Internet Suite II £110a
Dual Serial Card £104b
9-25 Archi or PC Wired Modem Cable £12ea.a
3-way Serial T-Switch (incl. comm. cable) £32b

Portable Computers

Carriage: a=£2, b=£6, c=£8
Pocket Book II (1Mb) £245b
Psion 5 4Mb RAM £395c
Psion 5 8Mb RAM £425c
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AutoRoute Express £30a
PsiRisc £69a
- one of the best packages for the PB/3a
A-Link £59a
Parallel Link £34a | PsiWin PC Link £80b
3/3a Mains Adap. £18a | 5 Mains Adaptor £20b

Scanners (Carriage £8)

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GTx-5500 SCSI bundle £265
GTx-9500 Para bundle £615
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Hardware Upgrades

24i16 Card (1Mb) £450b
DMI50 Dual Midi Card £138b
DMI50XGS Midi/Synth £335b
Dual Serial Card £104b
FPA for 25MHz ARM3 £67a
Joystick I/F (Not RiscPC) £30a
Logitech Mouse (Acorn) £29a
Movie Magic (1 only) £175b
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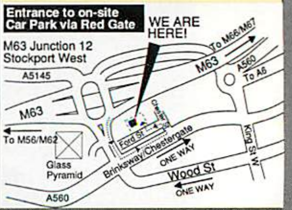
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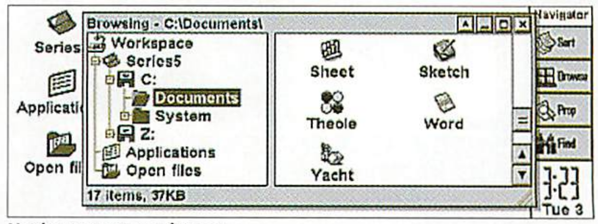
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Navigate your Psion



Navigate your workspace

Navigator, from Purple Software, is described as the essential tool for organising your Psion Series 5 workspace.

Navigator is, at heart, a replacement for the Series 5 system screen. The program is based around a Workspace (in RISC OS terms a desktop) and a Windows 95-style file manager. The program also brings some new features to the Series 5 such as shortcuts, zip file facilities and drag 'n' drop file management.

Installation is simple and is via the relatively new SIS installation system. This involves dropping the installation file (and the installer if not already present) onto your Series 5 and loading it. If you are using *PsiWin* on the PC this is achieved automatically but is equally simple if using *PsiRisc*.

Once installed, loading the program brings up an intro screen followed by a file manager window within the main screen or workspace. The browser is remarkably powerful – on the left hand side is the workspace and associated discs and folders and on the right the files/folders contained within the highlighted disc/folder on the left. It works exactly like the Win95 Explorer interface and files/folders can be moved and copied by dragging and dropping.

On the top of the window are four buttons which allow you to minimise (iconise), maximise, close the window and move up a directory within the file manager. One niggle here is that if you use the standard Psion close command (Ctrl-E), you end up closing *Navigator* and not the window you were looking at.

Files can be sorted and filtered in all the usual ways (by type, date, size and so on) and there is also a very powerful search facility which will not only search for files but also phrases within files. For example, searching for Peanut not only brought up the review I wrote in last month's *Acorn User* but also the deadline entry within *Agenda*.

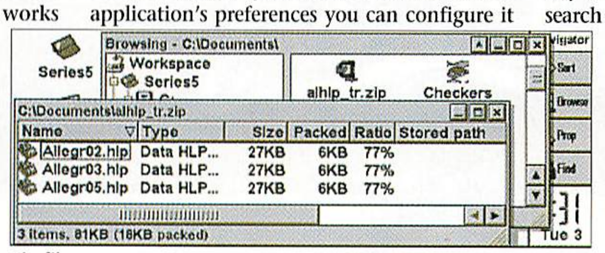
The workspace is very similar to that of the RISC OS pinboard. You can iconise files, directories and discs onto the workspace and shortcuts exist to bring up a list of the applications stored on the S5 and also a list of any open files. Applications can be launched from the list by simply double-clicking on them.

You can also create shortcuts to your favourite files and applications which then appear on the workspace.

The workspace is designed as a replacement for the standard system screen and within the application's preferences you can configure it so that pressing the system button brings up *Navigator* rather than the Psion desktop.

However, there are a couple of facilities missing from *Navigator* that are frequently needed, such as the ability to turn the remote link on and off or to check the status of the batteries. Several PD authors have provided applications that remedy this situation, two that I have tried are *PNPlus* and *NavPro*. Both work well, are free and allow access to the missing features, so the choice is yours.

Navigator also offers full zip file capabilities. New archives are created from the file menu within *Navigator* and files are copied into it simply by dragging. The program will also uncompress existing zip files, perhaps from the Internet and its treatment of such files is virtually transparent. The search facility will even search within ZIP files if you ask it to!



Zip files on your S5

Navigator is an excellent program which I highly recommend. There are a few niggles but none are serious and, since my review copy arrived, I've used nothing else to organise my workspace. Essential – just as Purple Software claim.

Purple Software
Tel: 0171-387 7777

Movie madness

If you're a bit of a cinema buff Palmtop's latest piece of software may interest you. *The Halliwell's Film and Video Guide*, available for the Series 5, contains full details of over 20,000 films and videos.

Before I continue, I must give Palmtop a virtual round of applause as they now include installation instructions for Acorn as well as PC and Mac users.

Each of the guide's entries includes information on the film's cast, writers, directors and producers. It also includes a plot synopsis and critical evaluation, video and laser disc availability, alternative titles and quotes from the film. Each film is rated on a scale of 0 to 4 stars and the package contains full details of Academy Award winners and nominations. Details of the film's soundtrack is also included and the guide highlights films considered suitable for family viewing.

The package is fully cross-referenced and the user can add their own notes and comments to any film.

The program is available now and costs £49.95. Before you rush out and buy it though, be warned, the program is about 4Mb so a large flash disc is vital.

A full review will follow just as soon as I can get hold of a larger flash disc!

Palmtop BV
WWW: http://www.palmtop.nl/

5Alive

If you want to keep bang up-to-date with all the latest developments in the world of the Series 5 then add 5Alive's website to your hotlist.

The site, which is updated daily, is home to the EPOCTimes, containing information on new products, updates and other items of interest relating to the Series 5 and other EPOC32 machines. The site also features a downloads section as well as reviews of some of the newer Series 5 products.

5Alive
WWW: http://5alive.psionking.com/

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to auport@idg.co.uk

Retro alert!

If you have ever owned or used a Sinclair Spectrum you're bound to remember some of the classic games of the era such as *Jet Set Willy, Batty, OutRun, Formula 1* and *Star Glider*. Now, thanks to Palmtop, you can relive those days on your Psion Series 5 with the release of their *Sinclair Spectrum emulator*.

The program allows the user to play virtually all Spectrum games, including those designed for the "state-of-the-art" 48K and 128K models!

The software allows you to alter the colour schemes, the speed the applications run and the size of the display. The program also includes support for .POK cheat codes, sound, screenshots, record/playback options and joystick emulation.

There are numerous sites on the Internet where you can download "images" of Spectrum games but remember copyright regulations state you must own the original.

The emulator works very well and is free to download from Palmtop's website. There are also a few links to Spectrum game collections on the same page.

Palmtop BV
WWW: http://www.palmtop.nl/



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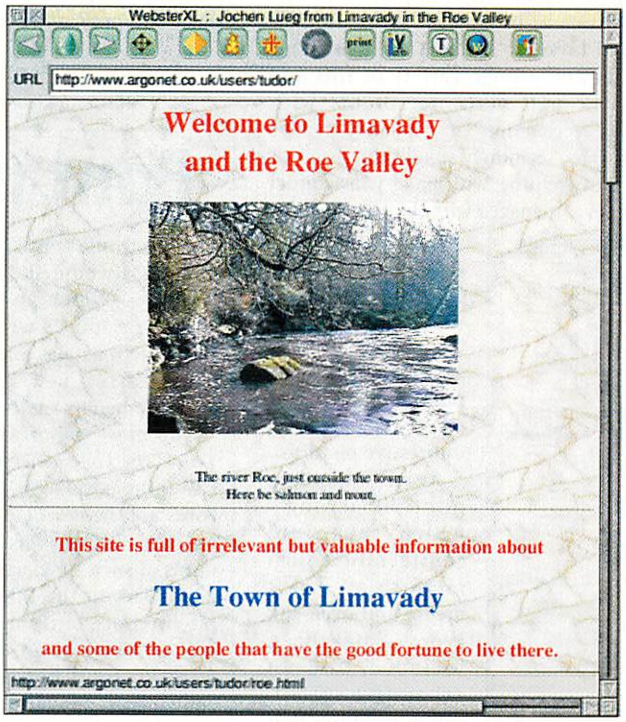
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A moving experience

Limavady is a shopping and dormitory town in Northern Ireland surrounded by stunning scenery that is home to Jochen Lueg, his wife Meg and their Border Collie, Tudor. You can take a conducted tour of the town that Jochen fell in love with 30 years ago by visiting his website, which also showcases some of his PD and shareware software.

Jochen works at the Limavady College of FE where he teaches Electronics and Computing. At home Jochen is a science, history and music lover, with particular leanings towards Astronomy, Bruckner and Acorn computers.



Site-seeing in Limavady

He suggests that users of his software register with a small donation that is used to buy upgrades and odds and ends for the College department.

!FSI_Batch is his neat front-end to *ChangeFSI* that allows multiple image files to be processed while you do something else. *!MoveSite* allows testing of an Acorn-designed website on a PC DOS-format system and browser, such as NetScape running on Windows 3.XX; Windows 95 users won't need *MoveSite* at all.

The shareware program copies and converts your complete website with any longer filenames and extensions of HTML and image files to standard Acorn-to-DOS 6/3 format, and can edit filename references inside the files too. It's always interesting to see what a mess other browsers make of your best efforts.

Jochen Lueg's best efforts can be seen at http://www.argonet.co.uk/users/tudor.

Driving around the block

We're wooing Internet defectors to come back to Bulletin Boards by offering access to Arcade BBS via Demon Internet at weekends when phone charges are at their lowest. On our own Weekend website you can list and download all the files in the 900Mb filebase. You can also Telnet in to the BBS from an Internet account anywhere in the world and enjoy local call rates.



Telnet is a protocol originally designed before the days of windows and mice for text-based communication with other networked computers. We're using a Telnet link to enable Internet logins to the BBS, but with colour and graphics not normally visible on simple Telnet terminals.

A special *Block Driver* has been created by Hugo Fiennes to convert almost any Acorn 32-bit COMMS program including *Arcterm7, Connector, HearsayII* and *TriLink* into a colour Telnet terminal that connects to Arcade BBS. The *Arcade Block Driver* is on this month's cover disc and can be downloaded from the BBS Internet file area #88, and our Demon website at http://www.arcade.demon.co.uk/about.html

Locate your *!SerialDev* application, probably inside !Boot.Resources in the new Boot structure, unzip the new *Arcade Block Driver* and place it inside your !SerialDev.modules directory. At the weekend between 2pm and 8pm, before you start your Internet software, load your terminal program onto the icon bar and select the *Arcade Block Driver*. Drivers for other BBSs with Internet connections are also possible.

Connect to the Internet and open your terminal window where you'll be prompted to press the Return key to connect to Arcade. You'll see a normal BBS login screen appear; enter your username and password and off you go. There are special FTP upload and download options for telnet callers since Zmodem cannot be used via our telnet link.

Parallel ports

ParaConXS is a freeware application by Stefan Langer that allows rapid copying of files between two Acorn 32-bit computers that have bi-directional parallel printer ports. A wiring diagram for the special ribbon cable is included in the program resources. When *ParaConXS* is run on both linked machines, files dropped on the icon on one machine pop up a save box on the other at typical transfer speeds of 120Kbytes per second.

ParaConXS
http://www.tfh-wildau.de/~tarabas/paraconxs.html

Opening doors

Matthew Page's *TelnetBBS* door program will enable dial-up callers to Internet-connected BBSs to reach out and log into servers all over the world. There are daunting implications for the hosting BBS operators who will be responsible for whatever mayhem their users manage to wreak. Sensible but esoteric BBS-originated activities might include telnetting to Port 80 of a Web server to receive HTML and image data, or to read e-mail from Port 110 of a POP3 mail server.

Keith Mckillop is working on a *MarsQuake* server door to enable up to four users on different ports of a BBS to connect up and play the game together. His research suggests that this would be a popular extension to the game so watch for developments.

Command performance

Justin Fletcher's *GMail* may possibly be the simplest and most powerful mailer currently available for RISC OS. *GMail* allows you use the RISC OS command prompt or a task window to type e-mail messages with all the features you're used to, like address book, signature files and custom configuration. *GMail* messages are added to the mail queue of your main Internet package, all ready to go when you next run it. *GMail* can be set up for all the popular Internet suites and mailers, and now supports BBS upload formats too.

GMail
ftp://ftp.barnet.ac.uk/pub/Acorn/freenet/j.fletcher/clients/

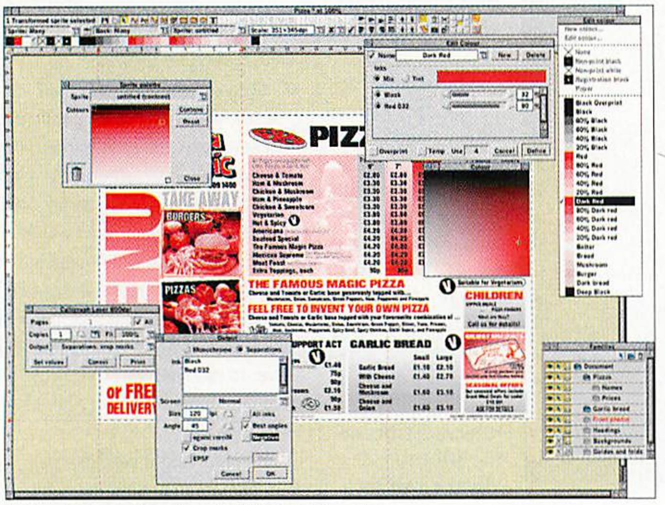
Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212

Project Avante

So do we finally have a replacement for *ArtWorks*? Well from what was being previewed at Wakefield it certainly looks like the reign of Computer Concepts' vector graphics package is over.

Codenamed *'Avante'*, the new vector application from Astute Graphics looks to be a revolution for the Acorn platform – a long-awaited revolution. It has been six years since *ArtWorks* was released and at the time it boasted features and speed to challenge *Illustrator* and *CorelDraw*. However, since the decline of Computer Concepts' interests in the Acorn platform, at least on the new developments front, and the constant progress made especially on the PC platform, the Acorn packages have become increasingly outdated.



A development front-end of Project Avante

By today's standards, when you compare *ArtWorks* to the likes of the latest incarnations of *CorelDraw* and *Illustrator* for features and *CorelXara* for speed, the Acorn alternative is a poor one. But *Project Avante* could change that.

In specification at least, *Avante* is most impressive. It addresses all the weak areas of current Acorn vector programs and incorporates professional printing support and PostScript interpretation for import and export.

The pure artist will greatly appreciate the fully antialiased on-screen display and novel features such as bitmap manipulation, an advanced layering system, variable transparencies and a huge variety of fills and blends through multiple colours with adjustable acceleration. From a purely creative point of view, seemingly small things such as slicing and welding will make you wonder how you ever managed without them.

Text handling has also been well-developed which will enable the user to exploit the program for publishing purposes and not simply for creating impressive pictures.

As for outputting, print previewing – which take into consideration such factors as print media and even ink types – has been included, and an exhaustive specification promises that even the strictest colour matching and highest end Repro requirements will be met.

The only aspect of *Avante* that has yet to be proven is its speed. Certainly the application's graphics engine will be competitive with pre-existing Acorn products but, compared to the benchmarks set by *CorelXara* running on PC cards or second-processors, will *Avante* meet with expectation?

Together with the arrival of *Photodesk 3*, with its long awaited layering technology, the imminent launch of *Avante*, or whatever it will finally be Christened, marks an exciting time for the Acorn platform. I hope that the ingenuity and effort funnelled into the graphics created with RISC OS software in the past will continue and that more unique imagery will emerge and perhaps grace the Graphics Page, with the use of these new applications.

Astute Graphics
Tel: 01989-567350
E-mail: nick@astutegrfx.demon.co.uk

Font news

The Electronic Font Foundry, apart from offering discounted 'Font of the Month' typefaces (which are normally around £120 for a full 25 weight set) for under £40 (plus postage and VAT), have also launched two new utilities which will be welcomed by many users.

The most important of the two is a *True Type Font converter* which sells for £39 (plus postage and VAT). True Type Fonts are the most common format used on the PC and there are simply thousands of such typefaces available for free download on the Internet. With a simple interface and instant conversion it will certainly be an asset to those who want PC fonts but cannot find Acorn equivalents.

And for the convenience of printing or cataloguing complete font tables, EFF's other new application, *Font Table*, creates drawfiles of font tables automatically. For only £7 this utility is also very good value.

The Electronic Font Foundry
Tel: 01344-875201
E-mail: sales@effonts.demon.co.uk

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler, at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to augrafix@idg.co.uk

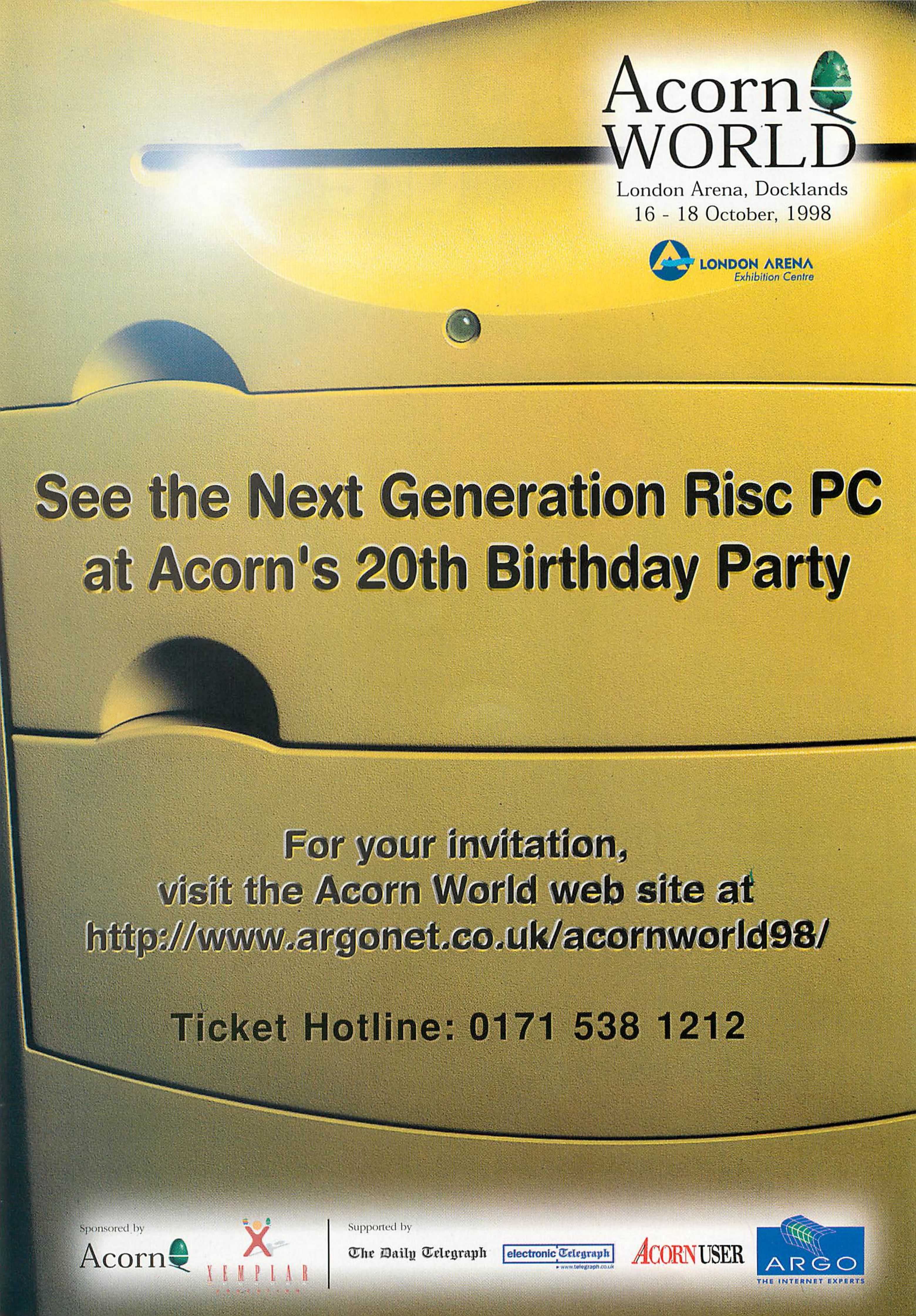
Picture of the month

This image, created using a combination of *ArtWorks* for the foreground graphics and a scanned bitmap for the background, is this month's winning pic by Mr T. Atkin who is 79 years old. He was inspired to recreate the image on computer after a visit to British Columbia and saw it as a challenge for the use of *ArtWorks*.

Aided by his A6 graphics tablet and printing out the image on gloss paper with a Canon BJC4000, Mr Atkin has certainly succeeded in capturing the atmosphere of the scene and the culture of the Kwakiuti Indian settlement of Cambell River which so inspired him. Congratulations go to Mr. Atkin and also the £20 cash prize and free copy of the *Phantasm* colour manipulation software for *ArtWorks* from Astute Graphics.



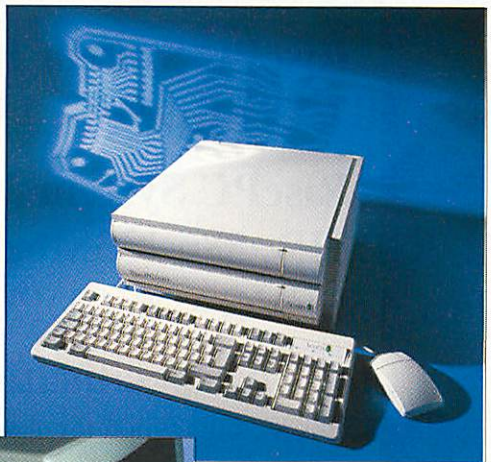
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Farewell old friend

We're even closer to the release of the much vaunted Risc PC II and after looking at the preview machines at the Wakefield show I have no idea what their impact will be on the business user.

The inclusion of certain technical features like PCI card support and MIDI, while welcome, may have already missed the boat in terms of closing the gap on the runaway success of the PC. Certainly the quoted price of around £1500 sans monitor will mean that those buying are doing so not only because the OS and front-end are better than any other alternative, but in part as a protest against a world in which there is almost no viable alternative to the Windows/PC monopoly.



Unfortunately the machines on show at Wakefield completely underwhelmed me. Forget the awful styling and the design faults, like the unrecessed on/off button, which may be put right by the time you read this. Forget the awful name – Phoebe, the flakiest and therefore most American of the Friends. What failed to impress me the most was the development of the desktop and operating system. I know these were early prototypes but I was looking for true innovation at the human computer interface.



When I asked what had been done to improve *!Draw*, I was told that the icons were now snazzier. *!Paint* was a similar tale. I was left with the distinct impression that for the money you'd be getting better colour and icons, long filenames and an end to the restriction of 77 files per directory. Some would think that it was money well spent for those three improvements alone – not I.

I do not want to sound either churlish or pessimistic and I'm sure the end result will be well worth the wait and possibly the money. I just hope that someone has the good sense to give RISC OS 4 a long overdue overhaul and not just some tinkering at the edges.

Of portables and things...

From a business perspective a portable is even more overdue than RISC OS 4. The Peanut certainly looked good and I was pleased to see a number of features like a built-in CD-ROM, a PCMCIA slot and the use of a glide pad to replace the mouse.



CD-ROM has become a universal requirement on other platforms as the primary method of loading programs. I know many of these are bloatware but even RISC OS programs have been growing to the point where the present floppy disc standard looks increasingly anachronistic. PCMCIA gives the machine the potential for the use of modems on card. If this potential is unrealised then I suspect the portable will be dead in the water. Lugging a modem about for access to e-mail and the Internet rather defeats the object of a portable.

As does the use of a standard mouse. The glide pad solution may not be to everyone's taste but it beats a small green button in the middle of the keyboard as on some portables. Glide pads are quite easy to use and I suspect the only difficulty with this solution is that the glide pad is a two button affair – the menu may be invoked by pressing both buttons together.

Again we will have to wait to see if the potential and promise of the machine is matched in the final versions.

Finally, it would be inappropriate to end this look at what I hope will be exciting future developments without at least a small tear in my eye as we see the demise of an old and truly innovative product – the original Risc PC.

Here was a great computer. Whatever Phoebe turns out like it will still look like a midi-tower with a yellow front. The Risc PC with its modular styling and baton proof plastic case should have won all the design awards.

OK, the slices were over-priced and the power supply under-powered but I suspect many will be loathe to give them up in favour of a mini-tower. Where are those tissues?

Be a 'Toner Donor'

The British Institute for Brain Injured Children are now able to recycle inkjet cartridges as well as laser jet toner cartridges. The scheme has been enlarged to cater for the home computer user as well as those who have an office at home.

So if you care for your environment and want to help this worthy cause contact Samantha Hansen at BIBC for a free information pack.

BIBC
Tel: 01278 684060
E-mail: info@bibc.org.uk

Invoice

This is a new entry-level program aimed at the small to medium sized business wanting an Acorn-based invoicing system. It comes from the same stable as the excellent *!HardCash* wages/salaries programs from RaspSoft Business Software. I intend to feature the program a little more fully on a future page but if you have a pressing need for invoicing software you could do worse than checking this program out. The price is a not very bank-breaking £30 (no VAT) including P&P.

RaspSoft Business Centre
Tel: 01274-671922
E-mail raspsoft@argonet.co.uk
WWW: http://www.argonet.co.uk/business/s.dine/

Correction

Following my mention of *ImageFS* from Alternative Publishing Ltd on the June page, I was told that the phone number was unobtainable. I checked and sure enough it was – even though the number was correct as given on the packaging I had received from Alternative only one month before. I was therefore surprised and pleased to see them at Wakefield. On mentioning this the only explanation seemed to be that they had used some old packaging – not a good idea if it also features old telephone numbers.

Anyway the current and correct telephone number for Alternative Publishing Ltd is 0141-418 0881 – apologies all round on my part but...

Contacting me

You can contact me, Mike Tomkinson, by post at the usual *Acorn User* address or by dropping me an e-mail at: *aubizniz@idg.co.uk*





Fixture Secretary

Richard Walpole

This *WimpBasic* program allows you to monitor and schedule the fixtures for amateur football competitions, it can handle more than one competition simultaneously. Launch *!FixtureS* in the usual way and then click on the iconbar icon, a toolbar will appear.

The first step is to enter a start date: Click on the green box below *Season start*, enter a date and click OK. The program will look up the date you have given and then amend it to the nearest Saturday. If you want to name the data enter a title in Season Title.

You must now enter at least four teams. Click on the Teams icon, a menu will appear and you should choose Full Database and this will give you a new window. For each team you must enter the name and a symbol – a maximum of five characters.

Next you need to set up the dates. At the far right of the toolbar there's a box repeating the season start date. The program will try to fill in the end date box later, but you can put in the date you think the last game will have been played by – it can be changed at any time.

The last main data is for competitions. Click on the Comp icon and enter the competition name and a code. The Competition type brings up a menu offering Cup or League.



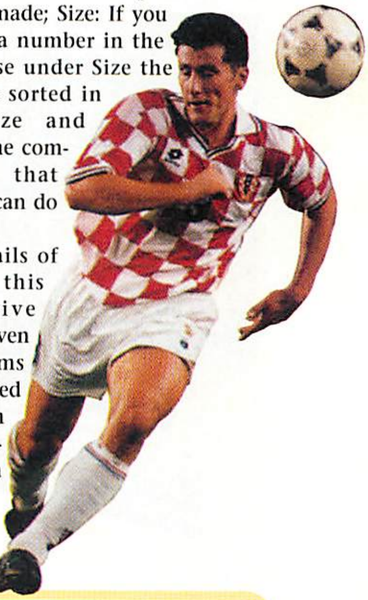
Forming fixtures

Before the fixtures can be created you specify which teams are playing in which competition and which dates the competitions are to be played on. The process is similar for both.

Click on the calendar icon – if the end date had not been set a box will inform you that a computer guess will be made and then you will need to click on the calendar again.

If all is well, a large grid screen will appear. On the left are dates, at the top are the Competition codes. To choose a date click on the grid box cross-referencing the date and competition. Clicking again in a ticked box will cancel the choice.

Be sure to allow sufficient dates for all the matches to be played. Entering which teams play in which competitions is very similar. Click on the teams icon again but choose Competitions from the menu. A similar grid to the last one will appear and a tick shows the team as entered.

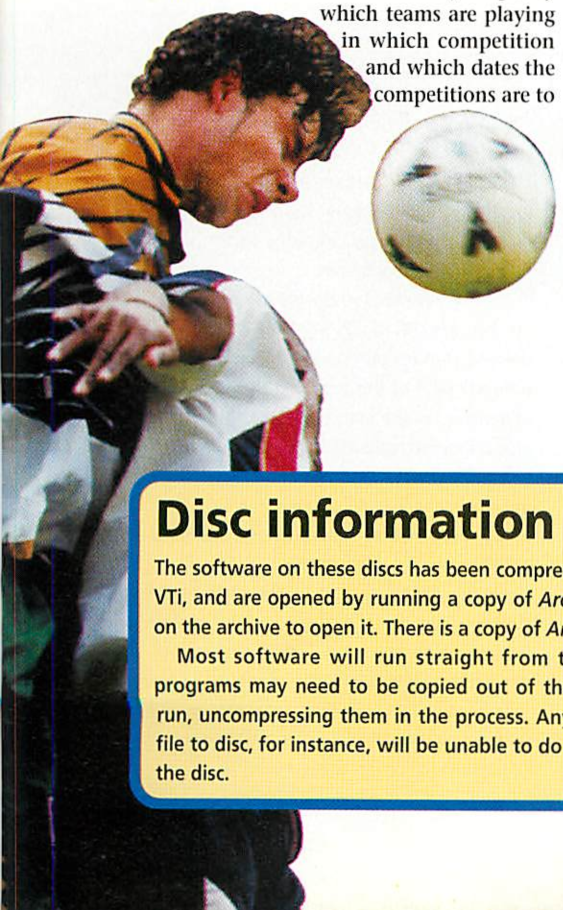


Fixture maker

To automatically create fixtures click on the Fixture Forming icon. A window opens and a smiley face on the left guides you through the choices. Choose the competition and then choose the competition from the menu. The next box will change from Type to either League or Cup. The smiley face will then be by Divisions if it's a league competition or Number of Winners if it's a cup competition.

Clicking on the Divisions icon brings up a window in which you can name the divisions and specify how many teams there are in each. This number must add up to the number of teams entered. When you are satisfied click OK. If your maths are wrong nothing happens, otherwise the smiley face moves down to Play each other.

Again click on the menu icon and you have a choice of playing once or twice, choose the one you want and again the smiley face moves down to Selection Method. If it was a cup competition instead of Play each other you have a choice of playing to one winner (normal) or three winners, used when the top three go on to other competitions.



Selection method

Clicking on the menu icon brings up a choice of Computer Random draw where you leave it all to the computer and the draw will be made; Size: If you have entered a number in the teams database under Size the teams will be sorted in order of size and entered into the competition in that order. Or you can do it yourself.

Further details of how to use this comprehensive program are given in the programs manual supplied both as an *Impression* document and as a text file.

Demos and Freeware

- *!IconizBar* – put your icons on a bar
- *!Office* 98 version 0.37
- Latest revision to *!QuikBoot*
- Another update to the *!Xuen* toolkit

Regular items

- Mike Cook's sound sampler
- All the *INFO programs

Disc information

The software on these discs has been compressed using *ArcFS 2* from VTi, and are opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on the disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

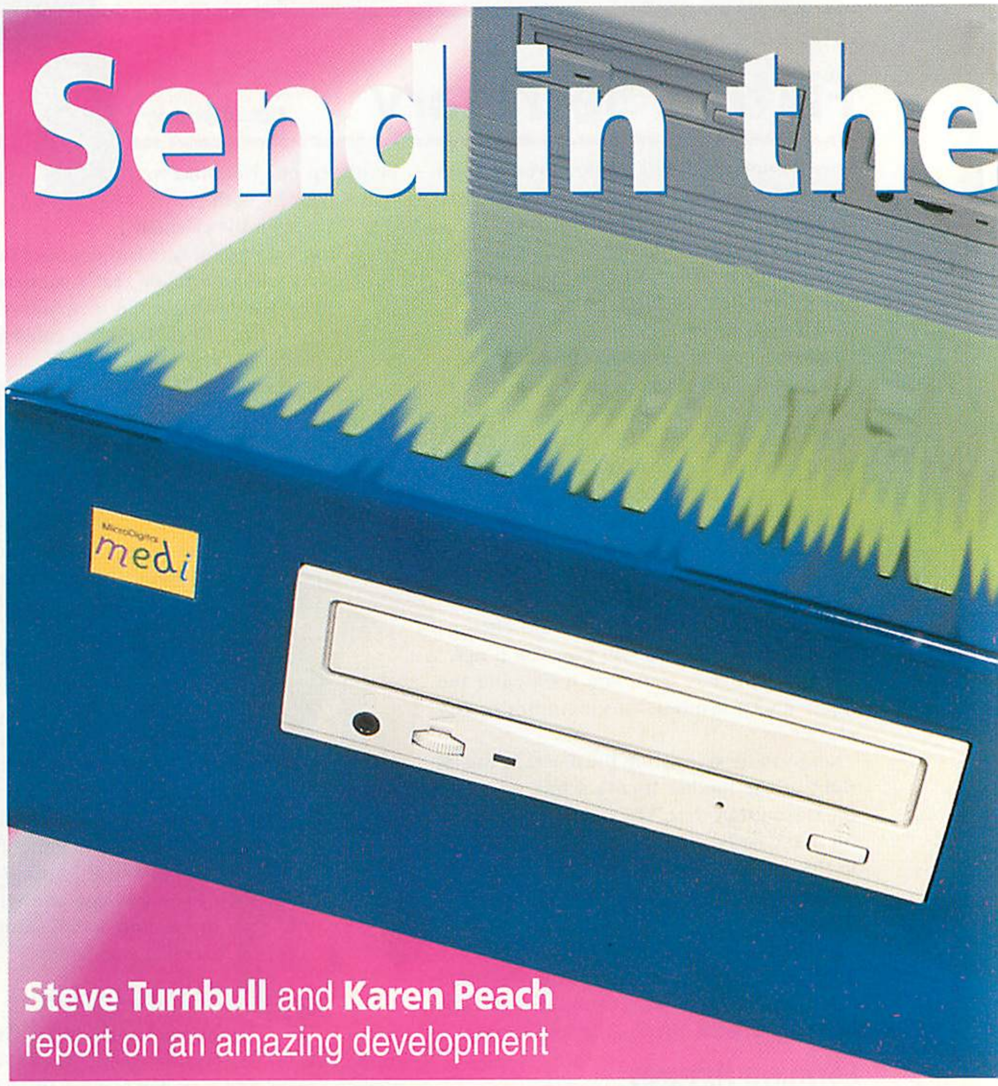
Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 3.001 from Pineapple Software.

Send in the



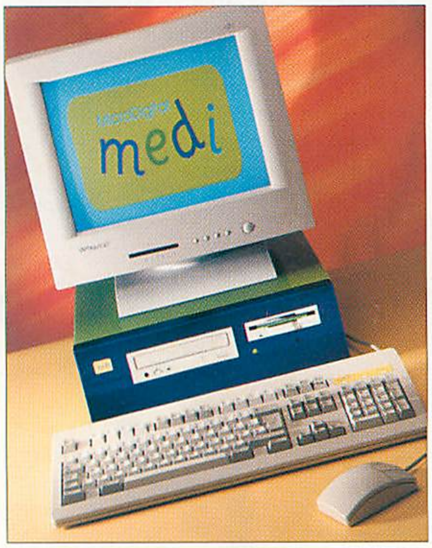
Steve Turnbull and **Karen Peach** report on an amazing development

Just when you thought all the fuss over the new Peanut portable had died down, another company steps out of the wings and says "Um, we've got an Acorn clone too". And they have, it's the Medi from MicroDigital.

The Medi is based around an A7000+ motherboard which means a 48MHz ARM7500FE running RISC OS 3.7 – not lightning fast, but a very serviceable speed for normal tasks.

The most important features of this machine – as it is just an A7000+ inside – are the differences: The hard disc system uses the IDEFS developed by one of MicroDigital's sister companies and as such has partitioning and very thorough password protection.

Unlike the A7000 design which has one



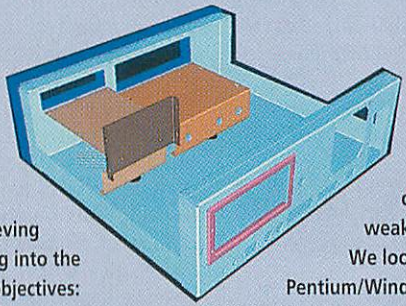
Company facts

We asked David Atkins of MicroDigital to tell us about his company and the new machine.

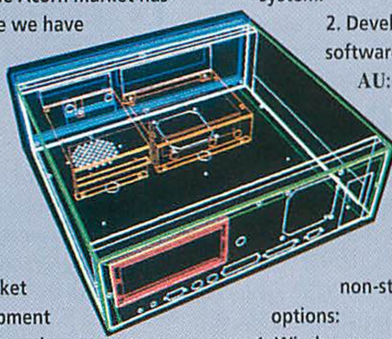
AU: *Who are MicroDigital?*

DA: MicroDigital are an arm of Focus-IT, a family owned partnership formed in 1993 to develop hardware add-ons for Eltec Computers, a large Acorn dealer owned by AB Electronics PLC then Hugh Symons PLC, both in their time Acorn distributors.

As with all markets, the Acorn market has evolved and to keep pace we have had to modify and adapt our corporate aims. This in turn necessitated our setting and implementing flexible objectives; not only to ensure that we meet the needs of a changing market place, but by the development of strategic divisions to greatly improve our opportunities to succeed. In June 1996 we redefined our medium term corporate aim and set two objectives by which we intend achieving our aim, without going into the rationale behind the objectives:



1. Develop and market a computer system.
2. Develop and market innovative software to go with it.



AU: *Why did you go for RISC OS?*

DA: To achieve our first objective realistically designing a processor and operating system from scratch was a non-starter, so we had two options:

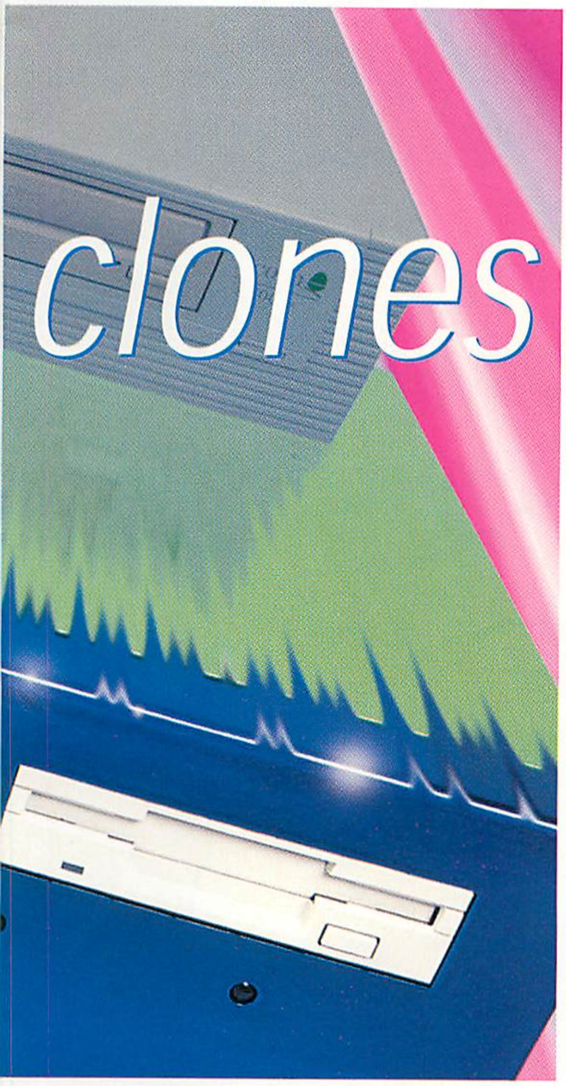
1. Windows on a Pentium
2. RISC OS on an ARM

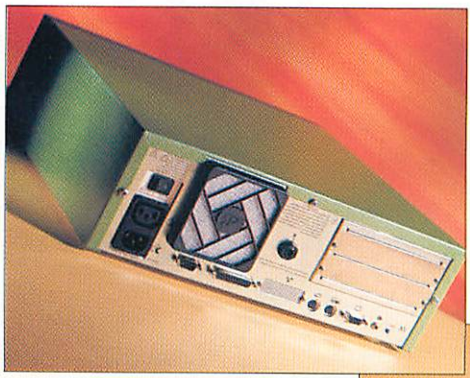
From market research we identified Home/Home educational market as the best fit to our strengths and weaknesses.

We looked closely at the Pentium/Windows combination and decided that for our market, the continual upgrade path of this technology was far too expensive for the market. Ease of use was also taken into account while Windows looks good it was not as easy to use as RISC OS and, of course, there is the support issue.

We also felt that the Pentium processor is nearing the end of its development cycle while the ARM is not yet on the steep rise on its development.

So, putting these two facts together, we decided that while initially sales would be less than those if we took the Intel route, in the medium to long term Acorn's technology presented the better investment.



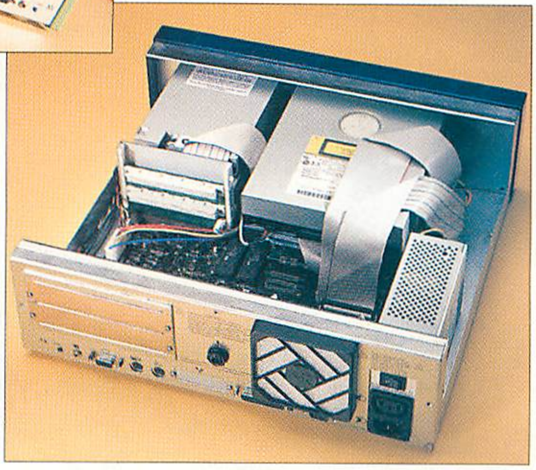


podule slot and an optional CD-ROM drive slot, which are mutually exclusive, the Medi has a CD-ROM drive as standard and two podule slots, both of which can be used. Using another piece of existing hardware, the Medi also has a standard 8-bit sound digitiser.

The box returns to the A5000-style metal case but unlike that machine the front piece is also metal – it's a very chunky machine. The colours are totally outrageous – deep blue and pale green – while the logo is yellow.

The main problem I have with the machine is the use of an 80Mb hard disc. While it's true that on RISC OS machines you don't need huge hard discs for normal activities, connection to the Internet and digitising sound is going to grab a lot of space. Booting up the machine gives the standard messages you would expect on a RISC OS machine, but you get a Medi logo before the standard Acorn screen.

David Atkins of MicroDigital explained that they deliberately kept in the Acorn screen because they want every owner to know whose operating system they're using.

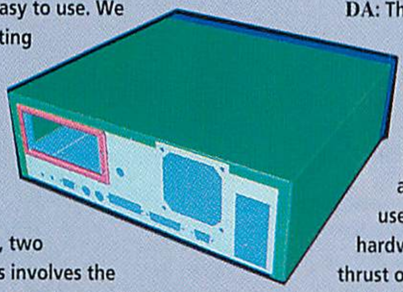


> *"We are always keen to expand the uses of our technology and MicroDigital's Medi represents just one more excellent opportunity."* – **Chris Cox, Acorn**

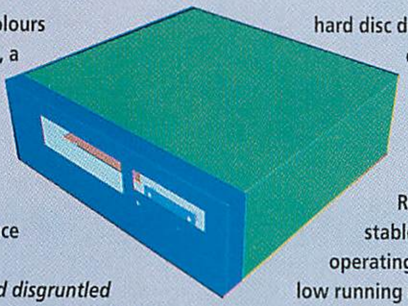
This machine is only the first step for MicroDigital, the next one involves producing their own motherboard, hopefully with a StrongARM chip or perhaps an ARM8.

Only time will tell as to whether MicroDigital can make this machine into a real success – but by it's mere existence it makes Acorn that much stronger. AU

AU: *How was the design work done?*
DA: I did the initial design on my own RISC OS machine and then exported the result as a DXF file to a high-power CAD machine. The output from this is then fed directly to the machines that cut and bend the metal shapes.
AU: *Why "Medi"?*
The computer all but named itself. Having decided on our target market, we felt that the normal office colours, multi light grey, were inappropriate – we want a home computer to be both exciting and non-threatening, something that looks easy to use. We spent a long time selecting colours that met this profile.



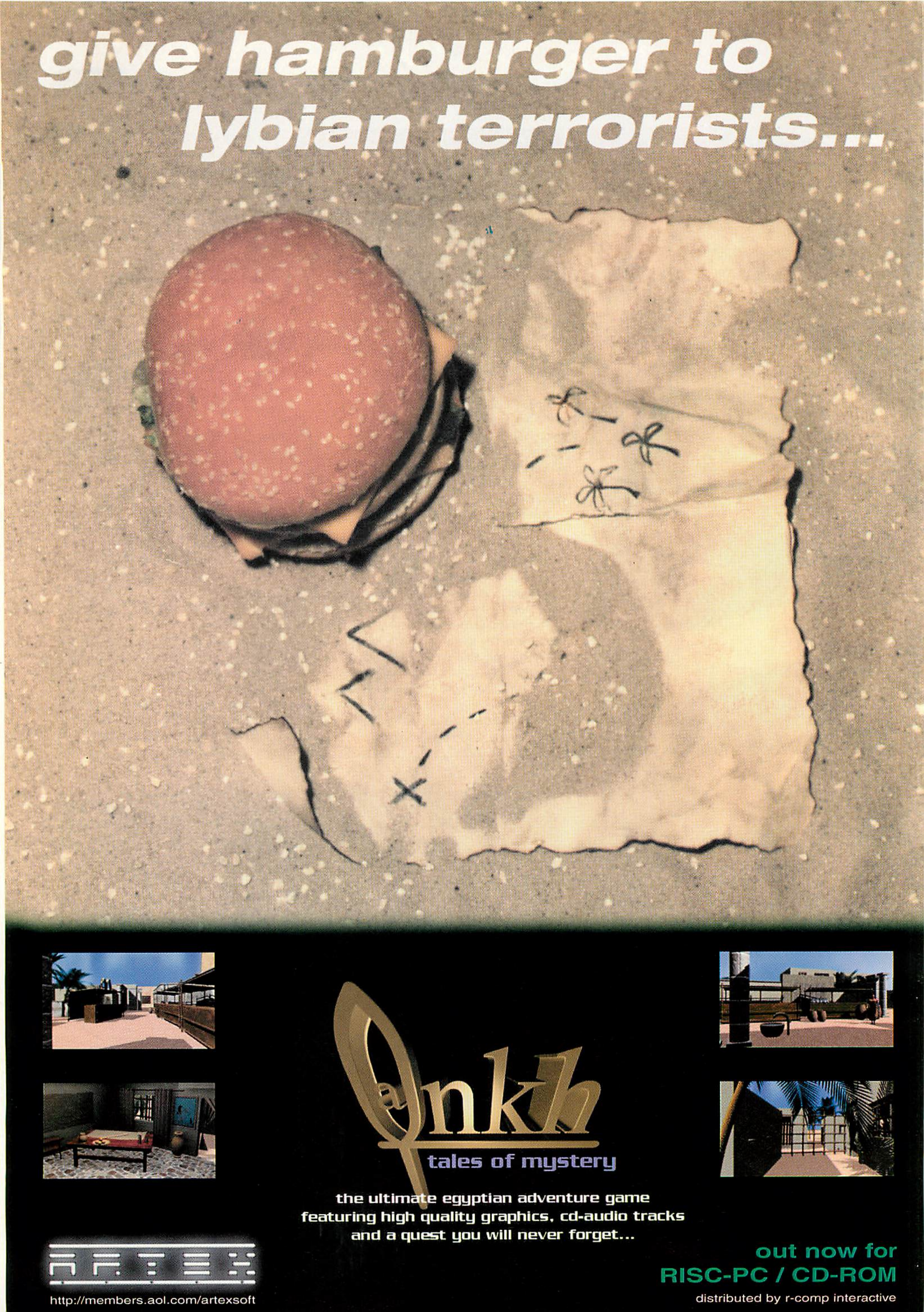
The colours selected are a vivid blue and pearl green. The colours are a result of a new process, two coat powder finish. This involves the normal one coat powder coating processes being carried out twice, the second time while the first coat is still hot from the ovens. This new process gives the colours depth or levels of colour, a consequence of which is the computer changes colour depending on the light – the result is a very Mediterranean look, hence the name Medi.

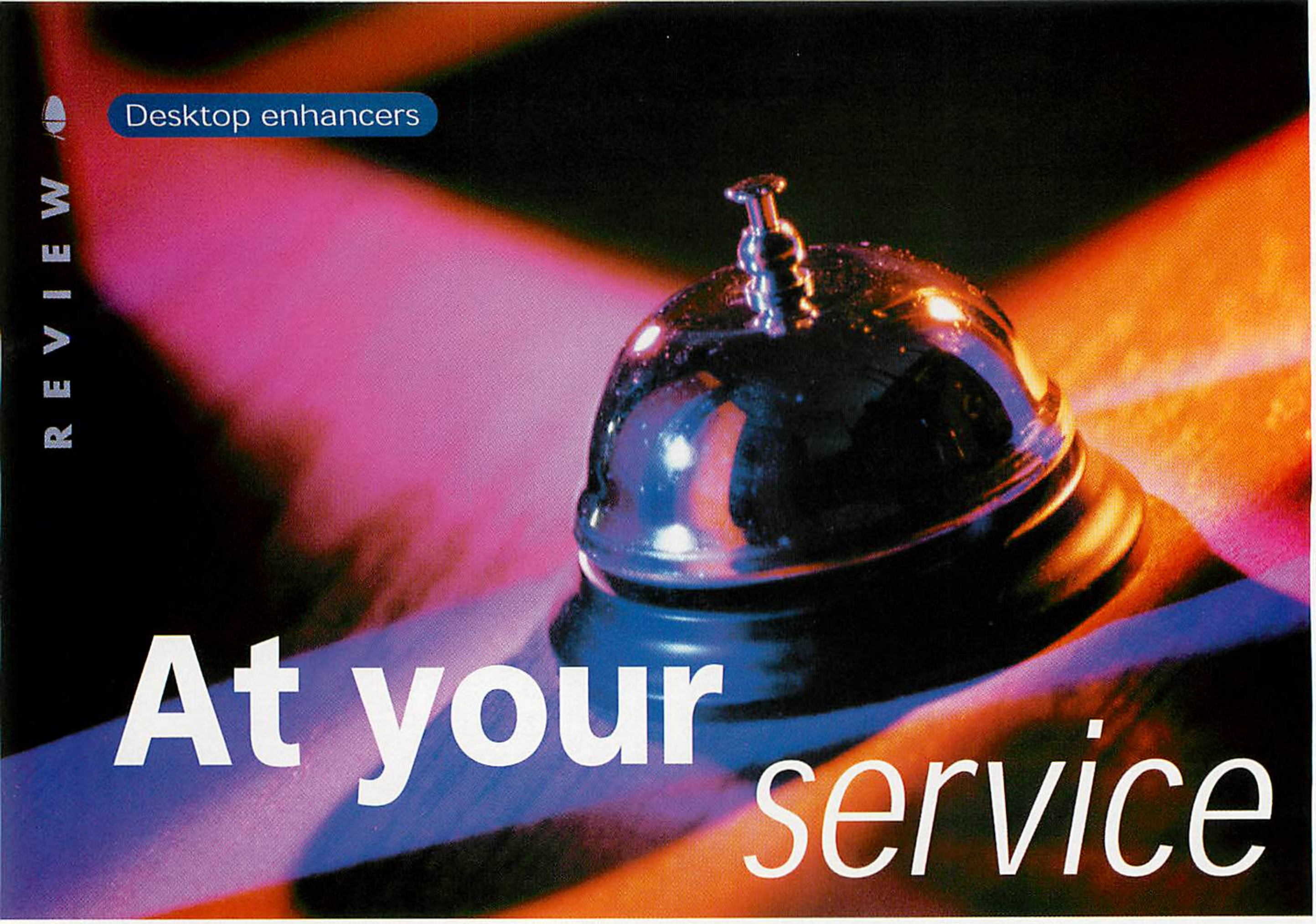


AU: *You have mentioned disgruntled PC users as part of your target market, can you explain why?*
DA: This group believed the "industry standard" lie, only to find out there's no such standard. While large companies can afford to write down assets against tax, the home user cannot afford the many hardware and software upgrades thrust onto the captive market.

So this group has two choices: Stay with the expensive, ageing PC technology by replacing processors, memory, hard disc drives and software, the cost of which is almost equivalent to the cost of the original computer, or cut their losses and upgrade to RISC technology with its stable, fully-featured GUI and operating system plus associated low running cost.

Our market research indicates that a considerable number will choose the latter route.
AU: *How will you sell it to these disenchanted PC users?*
DA: PC readers will be reached on a rotational basis with the message that MicroDigital replacement windows cost less and last longer.
AU: *What plans do you have for the future?*
DA: This machine is only the first step for us, we intend to replace the motherboard with our own as soon as possible. We do have quite a few ideas that are near readiness and won't be resting on our laurels – you'll be the first to know.


give hamburger to
lybian terrorists...
ankh
tales of mystery
the ultimate egyptian adventure game
featuring high quality graphics, cd-audio tracks
and a quest you will never forget...
ARTEX
http://members.aol.com/artexsoft
out now for
RISC-PC / CD-ROM
distributed by r-comp interactive



At your *service*

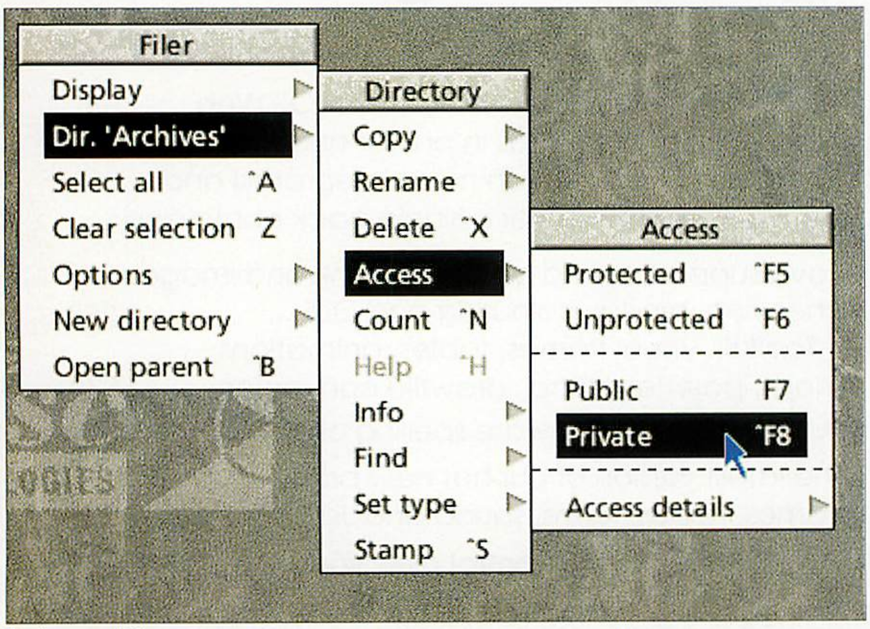
Simon Kiff looks at several patches for RISC OS to see just how useful they are

There are now many patches which improve the very way in which RISC OS itself works, improving the function or adding brand new features. Many of these patches are simple modules which can be run in the Boot sequence, while others need installation. Either way they tend to be unobtrusive and you only notice them when you need to use them.

QuickFiler – David Thomas

Quickfiler adds key presses to many of the Filer's functions. It lets Filer windows gain the input focus and then the function keys and control-key combinations let you change the display, access restrictions etc. For example, click on an application and press Control+H and it will load the help file.

I found this program very useful, even if you forget it's there it won't do you any harm. It can speed up tasks like deleting files as you simply select the files and hit the Acorn standard Control+X.



The improved Filer menu structure

Cool Switch – Wonderworks

This is a somewhat controversial piece of software, if only because it is a blatant rip-off of Microsoft Windows' Alt+Tab window selector.

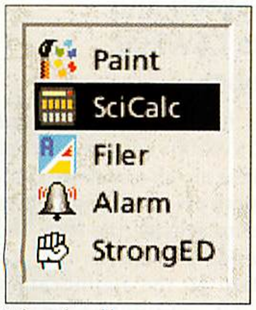
When you have many programs running at once (such is the flexibility of RISC OS), it is easy to lose a window that you need within the 'stack'. This program implements a window from which you can

Extrakeys, MenuClose, Spaced Files and TextCopy – Justin Fletcher

Justin Fletcher is well renowned for his patches of the operating system and he has probably added more features over the past few years than anyone else. All these four are modules which can be added to the Boot sequence and don't make themselves visible until you need them.

Extrakeys provides a few macros which people find useful as ALT-char combinations. These include single and double sexed quotes ("&") the current time and date in several formats, and even your own address. This is the kind of module I see being used by someone well-experienced with RISC OS, who is looking to save time wherever possible.

MenuClose saves you reaching for the keyboard if you wish to iconise a window



Where has file manager gone?

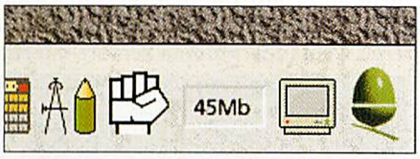
choose any task currently open, simply by pressing Alt+Tab, and pressing Tab until you have highlighted the one you want.

Like *Quick Filer* it is unobtrusive. You would never know it is there unless you accidentally pressed Alt+Tab.

Freemem – Alan Gibson

Everyone has seen free memory programs before and many of us already have them in our Boot sequence. They simply sit on the iconbar keeping an up-to-date display of how much RAM you have spare for applications to use and this one is as capable as any I have seen.

It has two options. Firstly to use its own font or to use your current desktop font



Freemem is fairly unobtrusive

(which will be system font on most pre-Risc PC machine) and secondly a quick option, which means it updates less often. It takes very little memory itself and I find it very useful, though less so since getting more RAM. On my A5000 it comes in much more handy since memory is always tight.

Autofocus and TopIconBar – Vincent Lefevre

TopIconBar provides one of the new features of RISC OS for older machines – that of bringing the iconbar to the front if you move the pointer to the bottom of the screen. That sounds simple, but how many times have you lost the iconbar at the back of the window stack and been forced to press Shift-F12 to bring it forward? This is a quicker solution and the iconbar disappears again after you've moved the pointer away.

Autofocus causes the window under the mouse pointer to gain the input focus (i.e. the title bar turns yellow). I don't personally find this useful, but there are so many of these programs around that somebody must like them! The only real problem I see is that if you click in a writable icon, then lean forward to type into it with the keyboard and knock your mouse, the pointer leaves the window and removes the caret from the writable. This caused me irritation on a number of occasions!

Conclusions

I suppose the best way to conclude a round-up like this would be to ask which software I am actually using as a result of trying all these programs out. Well, I now am the happy booter of *QuickFiler*, since I am so used to pressing Control+X to delete that translating that to Filer windows seems incredibly useful.

Currently I am not using *CoolSwitch* since I do not often seem to lose windows around the desktop, and it is a little too similar to Windows for my liking.

I am using *Freemem* because it uses such a negligible amount of memory, and occupies a tiny fraction of the iconbar. It provides a useful function without trying to be clever. As I probably made clear before, I am not a fan of autofocus programs because they can be extremely irritating, but *TopIconBar* is useful on my A5000 since it cannot run the new window manager which has this feature as standard.

As for Justin's patches – I really wouldn't be without them. They are invisible until you need them, and extremely useful when you do. How many times have you come across some text you want to put into, or take out of an icon?

Next month I'll be looking at programs which let you organise your desktop better – from button bars and program launchers to diaries and phone books.

AU

Product details

Quick Filer
http://www.tristone.co.uk/davespace

Cool Switch
http://www.wonderworks.co.uk/free

Freemem
Alan Gibson (no URL yet)

Autofocus & TopIconBar
http://www.ens-lyon.fr/~vlefevre/acorn/riscpc-eng.html

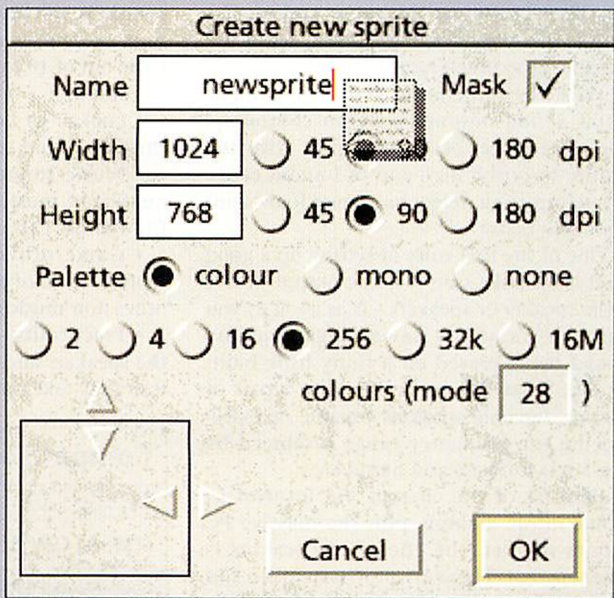
Extrakeys, MenuClose, Spaced Files & TextCopy
http://users.essex.ac.uk.8000/acorn/

onto the pinboard. Instead of holding Shift and clicking on the close icon, you hold Menu down over the close icon and click Select. This two click combination emulates Shift being held down, and the window disappears onto your backdrop.

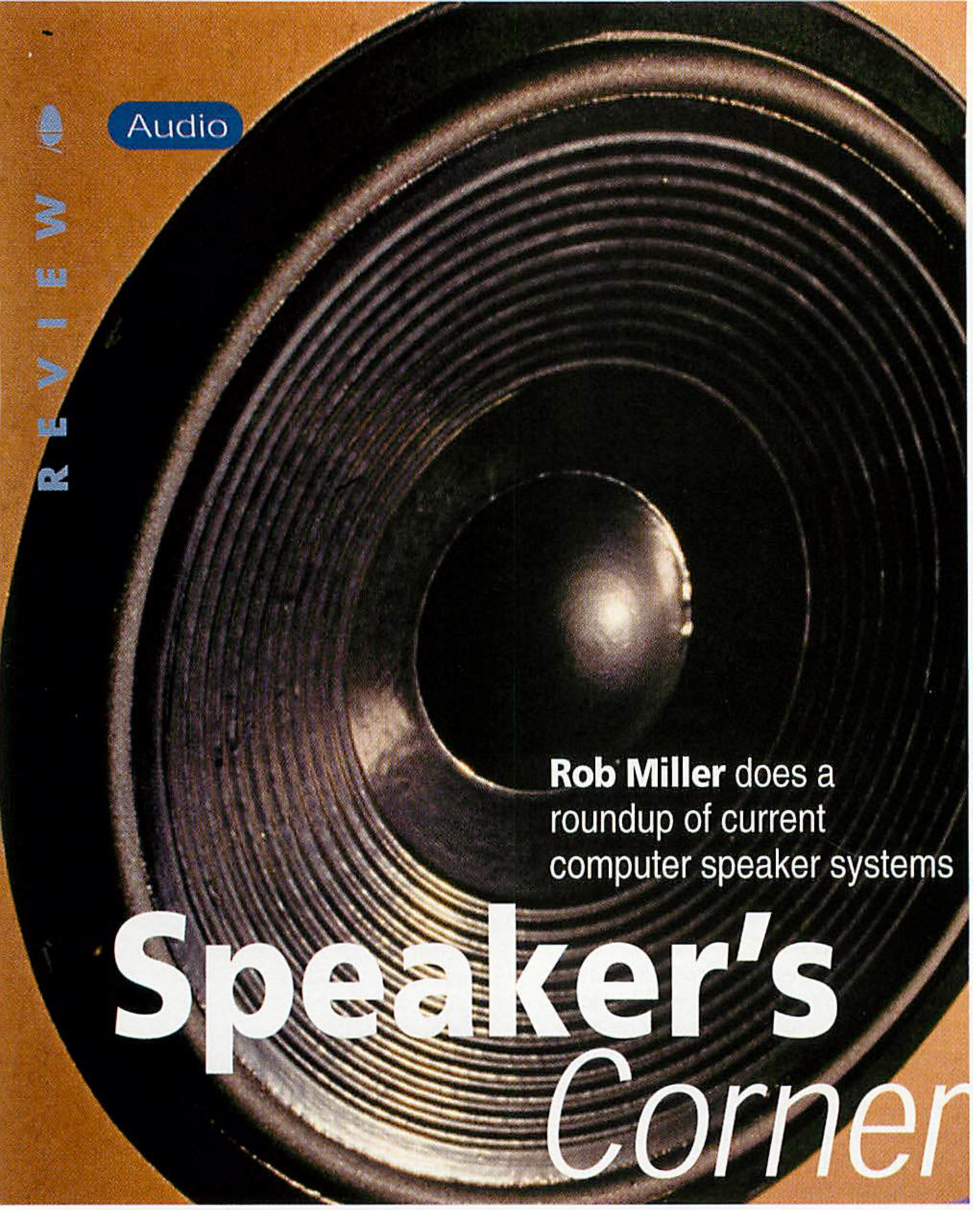
For a long time, RISC OS has been without spaces in file names. It has always been possible to simulate a space using the 'second space' created by Alt+Space, but this is not easily then included in Boot files and so on. *Spaced Files* automatically converts an ordinary space into an acceptable Alt+Space, so that it appears you have a space in the filename. As Justin himself says, it's purely cosmetic, but we can't have Windows 95 users showing us up, can we?

The final program from Justin is the one I find most useful. *TextCopy* has two basic functions. Firstly, it lets you drop a text file into any writable icon under RISC OS. For example, if you saved a URL as a text file, you could drop it into your address book. Secondly, it allows you to pick up any writable icon in RISC OS and drop it elsewhere as a text file.

With the two functions combined you can copy the contents of one writable into another by dragging from one to the other. This lets you copy items around in address books, grab URLs from any Web browser and save them onto your hard disc. Of course it allows you to bypass the copying of a file by either holding down Shift, which copies the filename (instead of file contents) to the writable icon, or by holding down Control, which hands the accepting of the file into the writable icon over to the program itself. I now frequently use this patch, it saves so much typing and is otherwise transparent.



Just grab a writable icon and out pops a text file!



Rob Miller does a roundup of current computer speaker systems

Speaker's *Corner*

Over the past couple of years, the quality of output from computers both in terms of graphics and sound has increased dramatically. Whereas a relatively short time ago we would have been happy with the 8-bit output of the early Archimedes range, the latest machines from Acorn are capable of so much more.

With the impending arrival of Phoebe 2100, sound output on Acorn computers looks set to get better still, plus with the ability to utilise high-end PCI audio cards, the Acorn sonic scene has never looked (or sounded) better.

One of the first rules of setting up a good hi-fi is to make sure that the output device – the speaker or speakers – is as good as you can get. It's no use having digital-quality sound being played on a tinny little built-in job. What you really need are a pair of decent, separate speakers capable of reproducing the frequency range produced by the latest software and hardware.

Because of the current big interest in home music making, plus the massive PC games market, the choice of speakers is phenomenal. There are now systems to suit every situation and budget and in this review I've tried to cover different types of each. Whether you're just a occasional games fan, or you're serious about making music at home, this review should give you a good idea of what's on offer.

The speakers

Before I continue, I just want to mention a few words about how I've reviewed the various systems. Obviously sound quality is important, but just as important to some people is the practicality. So, I've devised four categories and given each system a score out of 10 for each one.

These are:

• Looks – or how the system fits in with the rest of your computer setup;

• Music sound – a mark based on the quality of music played via the speakers, from music CDs in your CD-ROM drive;

• Game/other sound – the quality of reproduction of game sound effects and/or other non-music software, and finally;

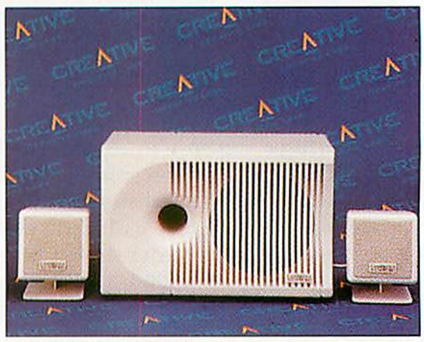
• Practicality – how easy it is to set up the speakers and how much physical space that they take up.

PCWorks CSW100 and SoundWorks CSW200 (Creative Labs)

First off are the PCWorks CSW100 and SoundWorks CSW200 speakers from Creative Labs. These are an extremely compact design and both are accompanied by a larger sub-woofer to provide the bass. The three speaker design also means that it's possible to contain all the amplification circuitry in one unit – in this case the sub-woofer – and the left and right speakers can be both small and light in weight.

Setting up the CSW100/CSW200 is a simple case of plugging them into a sound source via a 3.5mm stereo socket (like that on the back of the Risc PC) and powering them up. The speakers are driven using a 12V power unit (complete with fitted plug) that comes supplied as part of the package.

Unlike most computer speakers, the CSW100/CSW200 are supplied with more than enough cable and it's even possible to stretch them from one side to the other of an average room. This made it easy to set them up in just the right position while still being able to tuck away any loose wires. A handy volume remote control means that they can even be placed out of reach safe in the knowledge that you don't need to fiddle around behind them to change the output level.



SoundWorks CSW200

After turning the speakers on there was no discernible humming (always a good sign) and it was only once some sound was pumped through them that they burst into life.

To be honest, I'd not expected much from such tiny speakers but I was more than impressed. On a noisy game like *Doom*, the output was excellent, especially when the sub-woofer kicked in for the bass frequencies. High notes were equally as

Comparison Table

	Looks	Music	Game	Practicality	Overall
PCWorks CSW100	7	8	8	9	32
SoundWorks CSW200	7	9	8	9	33
Labtec LCS-2420	8	8	8	8	32
Labtec LCS-1224	8	7	7	8	30
Yamaha YST M100	9	10	10	7	36



PCWorks CSW100

clear. As a rather more melodic test, I tried the speakers while running ESP's MIDI software synthesiser.

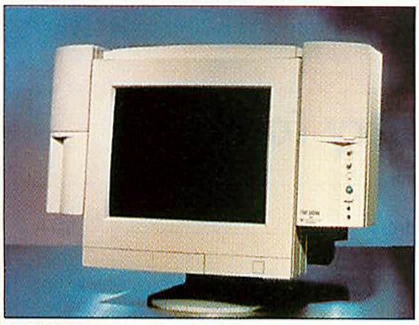
Again, the results were extremely good with the "real" instruments such as oboes, violins and pianos sounding just like, well, real instruments. Other music programs such as the various tracker players fared equally well with excellent reproduction in all cases.

All in all, both the CSW100 and CSW200 performed extremely well. The CSW200s are the more expensive of the two, justified as they have a distinct edge over their smaller brother. Both sets are ideal for an average computer setup where sound is important – go for the CSW200s if you can afford it.

Labtec LCS-2420 & LCS-1224

Next up are the Labtec LCS-2420 and LCS-1224. Both sets of speakers are mains-powered and both sets come in the usual grey/cream finish favoured by peripheral manufacturers. While the Labtec LCS-2420 are supplied with a sub-woofer as standard, the Labtec LCS-1224 aren't, although they do have a rather nifty spacialiser built-in which is meant to give a 3D effect to the sound.

Setting up both sets is easy, although the two-pin plugs on the power supplies meant

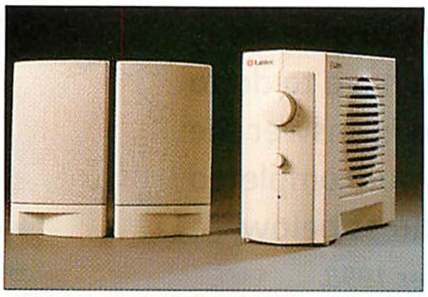


LCS-1224

a quick trip down to the local electrical shop for a converter before I could plug them in. The cabling, while not as long as that supplied with the Cambridge Soundworks CSW100/200s, is adequate for the job and allows the speakers to be placed far enough apart for a decent stereo effect.

One point that Labtec are keen to stress is a rather odd bracket device that's supposed to be fitted on the top of your monitor, on to which the speakers can be mounted. This is meant to do away with the need for trailing wires everywhere although I prefer to have the speakers further apart. I was also concerned that having the speakers so close to the monitor might affect the picture (have you ever put a strong magnet next to a television?) although fortunately this wasn't the case.

Soundwise, the Labtecs performed well but not as well as either the CSW100/CSW200s or the Yamaha YST M100/MSW10. They're fine for the average user who wants to play the occasional game, or bit of music, but anything too taxing like a booming bass was just a bit too much for either set.



LCS-240

To be honest, the two sets of Labtecs are to the speaker world what the Ford Escort is to the car world. They're nothing spectacular although what they do, they do well. To sum up, they're ideal for those on a budget.

Yamaha YST-M100 speakers & YST-MSW10 sub-woofer

Last, and by no means least, are the Yamaha YST-M100s. Unlike the other speakers in this test, the cases are not the usual plastic but are actually made from chipboard, just like those for audio hi-fi. In fact, if it wasn't for the colour, a slightly off-white cream, it's hard to tell the difference – both in terms of looks and sound quality – between these and normal hi-fi speakers.

Setting up the Yamaha YST-M100s is simple, although the size of the cabinets and the relatively short length of cable between them means that you need plenty of extra desk space to house them. The



YST-M100

speakers have their own built-in power supply and connect directly to the mains. They also have the option of being linked to a separate sub-woofer (the Yamaha YST-MSW10) which in turn requires an additional power source. For this reason, I've given them a relatively low score for practicality.

In use, the speakers performed superbly. Effects from games became almost believable and I just can't wait to hear what *Quake II* might sound like through such a system. Music software was pushed to the limit with MIDI playback being especially good. Just for a quick test, I tried playing an audio CD through my CD-ROM player and the resulting sound was as good if not better than that from my midi hi-fi.

If you want the best and you have the money, these are the speakers to buy. For the same price you could buy a separate hi-fi amp and speakers although I think you'd be hard pushed to tell the difference in sound quality. I reckon they're also the best looking of the bunch and of course, would make an ideal partner for the Phoebe 2100.

Conclusion

By far the best speakers are the Yamahas although they were also the most expensive. The Cambridge PC Works and SoundWorks are fine as all-rounders and the Labtecs make an ideal choice for those on a budget.

In part two of this review, I'll be looking at a few more makes of computer speaker, plus I'll be doing a comparison with Wharfedale's latest in their Diamond series, the (active) Diamond 7s.

AU

Sub-woofers

For those not up on speaker jargon, a sub-woofer is simply a single speaker designed specifically to reproduce low frequency sounds. Without getting too deep into acoustics, suffice to say that you only need one sub-woofer which can be placed anywhere in a room, unlike normal speakers.

Most sub-woofers are quite large and work by pushing a volume of air through a hole to produce the bass notes. On its own, a sub-woofer can sound almost inaudible, but with normal speakers playing alongside, the effect is amazing.

Product details

Availibility: Contact your local dealer

	RRP (inc VAT)
Yamaha YST-M100	£119
YST-MSW10 Sub-woofer	£99.99
Labtec LCS-1224	£59.99
Labtec LCS-2420	£59.99
PCWorks CSW100	£39.00
SoundWorks CSW200	£99.00

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LCS-1224 features

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- Three inch, high excursion Max-X drivers for maximum performance and quality
- Power output of 10 watts RMS at one per cent distortion
- Frequency response is 70Hz to 20,000Hz

LCS-2420 features

- Newest three-piece space-saving speaker system
- Dynamic Bass Equalisation – actively adjusts the bass for distortion-free sound
- Ported Enclosures – specially designed to reduce distortion
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- Crossover frequency – 180Hz
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Labtec competition entry form

1. What type of experience does the Spatializer™ sound technology give?
   - ❍ Surreal
   - ❍ Surround-sound
   - ❍ Mind-blowing

2. What type of speaker mounting system do Labtec use?
   - ❍ Tidy Desk
   - ❍ Clear Desk
   - ❍ Empty Desk

3. What type of drivers are used with Labtec's speakers?
   - ❍ IMAX
   - ❍ MaxI
   - ❍ Max-X

If I am a winner I would prefer the
❍ LCS-1224 speakers ❍ LCS-2420 speakers

Name ....

Address ....

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Postcode ....

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Send your entry form to *Acorn User* Labtec Speaker Competition, IDG Media, Media House, Adlington Park, Macclesfield, Cheshire, SK10 4NP

I am a current *Acorn User* subscriber ☐ Yes ☐ No

☐ Please tick if you do not wish to receive additional promotional literature

Closing date for entries is 1 October, 1998.
The Editor's decision is final

Phoebe is Coming to Town

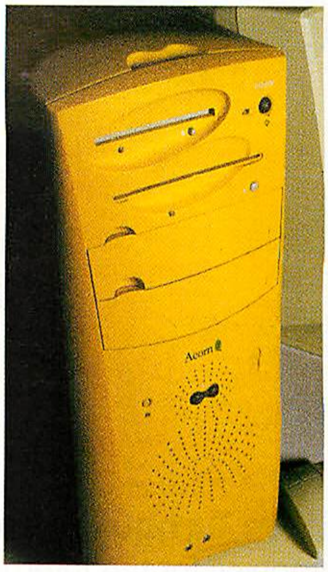
- ❑ 32Mb SDRAM
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- ❑ RiscOS 4 operating system
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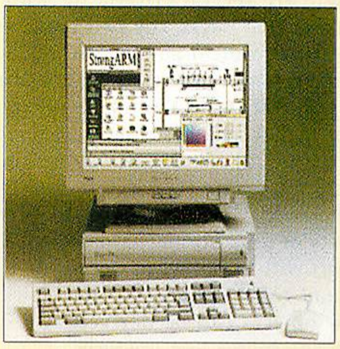
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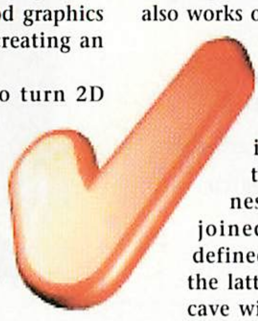
Acorn — Centre of Technology

WebFX 3D

Steve Turnbull explores a new dimension in graphics for the Internet

There are several criteria on which to judge Web pages, the two most important are its content and its aesthetic value. It's the second of these which is addressed by *!WebFX3D* from Dansoft Developments – not that it will guarantee good graphics but it gives you the tools for creating an interesting variety.

Essentially it allows you to turn 2D objects in draw format into 3D objects with a variety of lighting and colouring effects. The draw objects can be derived from any source that produces draw files, or from within the program itself from text using any font you happen to have.



The program also comes with a couple of add-ons which generate specific types of shape and bypass the draw file stage: *!Spheroid* and *!Torus*. The first step is to either drag in a draw file or enter some text and the font you want. You can then adjust the aspect ratio (does it look squashed or stretched, this also works on imported draw files) and, most importantly, the type of 3D look you want.

Imagine a square, then imagine it "extruded" into the third dimension so it has thickness. The way the front face is joined to the back face can be defined as flat, curved or bevelled, the latter two can be convex or concave with respect to the object itself. You can see an example of a curved join in Figure I.

Once you're satisfied with the options you click on Generate and the program converts the whole image into polygons – the mesh – that it uses for rendering. The time needed for this depends on the complexity of the object, and the processor speed. I was using a Risc PC 600 for this review and creating the mesh for the "Smooth" example took about two minutes.

You are then presented with the main 3D screen, it's here that you control the camera position, object colour and shininess, and have access to the plug-ins which can be used to distort the mesh, the ones

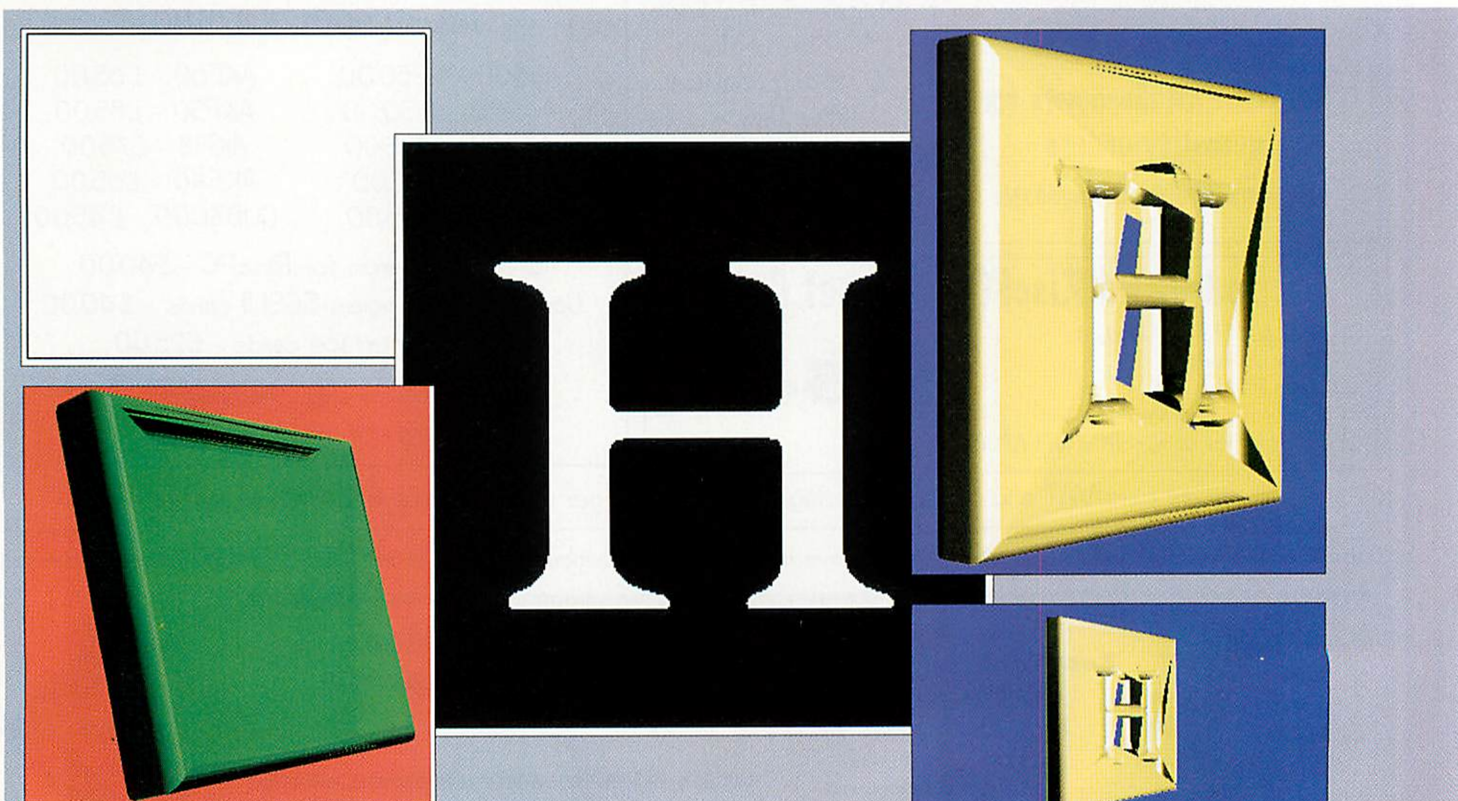


Figure I: Rendering a simple square draw file

supplied are called *Bend, Scale, Twist* and *Wave.*

Both plug-ins and add-ons use an open architecture and Dansoft look forward to other interesting additions.

From the menu you can get to a number of further dialogue boxes, the main options such as whether the mesh should be displayed as wireframe, solid or both – for complex images the wireframe option is a must though you can get away with more complex ones with a faster processor.

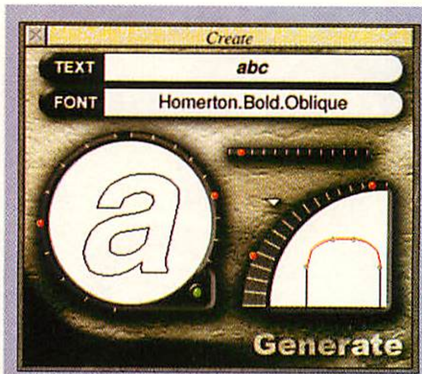
If the solid option is used you can select various render options: Whether to have lighting highlights or not; whether to use directional lights; have atmospheric effects or use lighting attenuation.

Other dialogue boxes are the Atmosphere control, which allows you to produce a fog effect, the fogging level and colour is configurable. There's also a scene gallery, the various options that have been set for a given scene can be saved under a specific name and then re-activated in a different scene later on, particularly useful if you're trying to achieve a consistency of design.

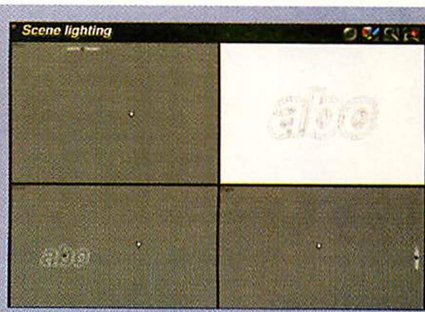


From the main window or the menu you can also go to the lighting window which presents three orthogonal views plus a smaller version of the main display. From here you control the overall lighting level (the ambient light) plus the position and colour of individual lights, you can also set their attenuation levels, which are activated and de-activated globally from the main options window.

Attenuation is defined by two circles set concentrically around a light, the lighting effect is at full power up to the inner circle and then drops to nothing at the outer circle. Using this you can half-light an object – which could then be rotated if you were creating an animated image. From the main window menu there are two options for saving. You can save the display as an unshaded draw file – it will appear more or less the way the mesh does on screen. The other option is as a VRML file which is a popular 3D viewing technique used on the Web.



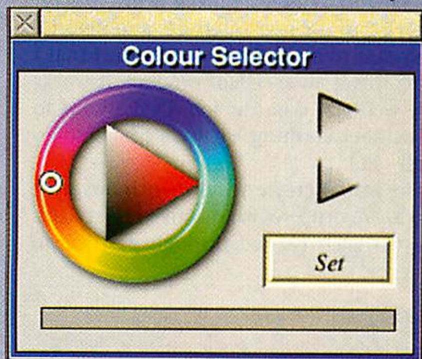
The create window: Very stylish



The lighting control window: Not a lot of style



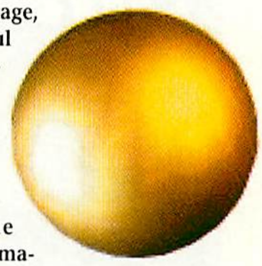
The main edit window: Style round the edges



The colour selector – why isn't the title in the title bar?

Once you've created the image that you like it's time to render it and there are a lot of options you can use. You can control the size of the output image in pixels; how the rendering is done, whether z-buffer and/or anti-aliasing are used which can significantly improve the final quality of rendering. You can also set the background colour to pure white or pure black independent of the scene description.

Drop shadows are *de riguer* for Web graphics and you can add one at the render stage, this has lots of useful options such as relative positioning, transparency, sharpness and so on.

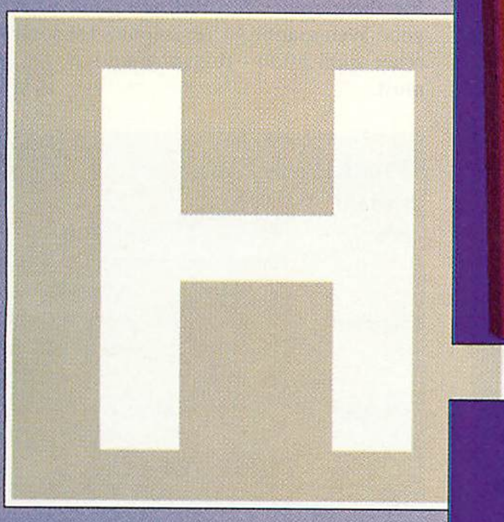


Another important feature is the ability to create animation, these are fairly limited in some respects: You can rotate the object; zoom it back and forwards; fade into the background or you can make the lights circle the object. There's an example of this in the "smooth" sequence.

There are also a whole set of output formats you can use: 16 million colour sprite, 256 colour sprite, JPEG, Targa and PBM. For the 256 colour sprite you can have the standard Acorn colour set, an optimised set of 256 colours or a grey scale.

After rendering a save window pops up and you can save the image out.

➤



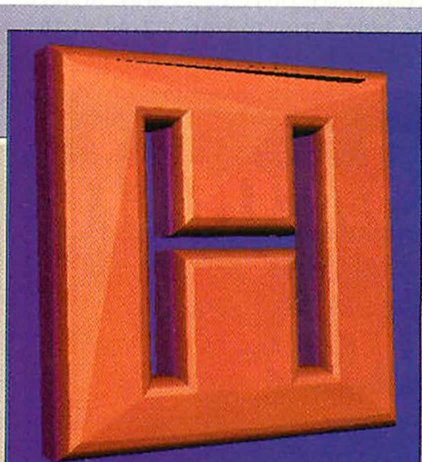




Figure II: A square punctured with the shape of an H was created in Artworks and then exported as a draw file to WebFX3D. The first example was too complex – but WebFX3D didn't crash, it issued a warning saying it couldn't do it. The simpler version worked fine

WebFX 3D

The interface

Up to now I have made a point of not referring to the user interface, and before I do I want to make it absolutely clear that I think this is an excellent product. It works very well and does the job it's designed to do without crashing – it hasn't fallen over at all – but...

The initial create window is innovative (for an Acorn program) and very stylish. The design is carried through partly into

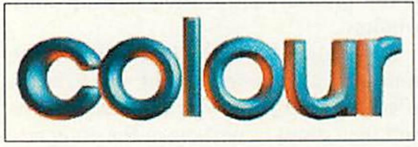


the main window, but is never seen again. In fact, the other windows sometimes look like Acorn windows and sometimes look like nasty Windows-hybrids. This doesn't stop it working, but is irritating.

The "analogue" controls in the create window are fine except that sometimes it's difficult to set the exact value you want. The ability to type-in values would be appreciated.

The main window redraw code needs some work, because on a non-StrongARM machine the redraw testing of screen areas that absolutely do not need it slows things down horrendously – you can switch to wireframe display, of course.

In the lighting window I want to be able to double-click on a light and have the edit window appear, not have to move the mouse up to the icon every time. I'd also prefer to be able to Adjust-click the Set button to keep dialogue boxes on screen, or have an Apply button. Which would



also alleviate the screen redraw speed problems.

Currently there is no way to save the object you're working on at the intermediate stage before rendering. So if you get interrupted you're stuck. Just saving the mesh would be useful, being able to save all the options would be ideal.

The manual

The program comes with a main manual, a hints and tips booklet and an online help manual. The electronic help is not based on *StrongEd* but a home-grown program.

I find this a bit annoying for two reasons: For a start it means I have yet another electronic manual format, but more importantly the one supplied isn't very good. The content is fine and I have used it successfully, but it's limited. For example, it doesn't reformat the text to the new window width if I reduce it, and that means I can't have a narrow window at the side of the screen with the text in it.

The manual has no tutorial section. The first part describes the controls in each section as you would use it and there is some explanatory text, but it really could have done with some worked examples illustrating how to implement the main features. It took a fair bit of experimentation before I started producing the effects that I really wanted, instead of just interesting accidents.

Summary

Despite my comments about the user interface this *is* a worthwhile product, it provides a low-cost way of producing some excellent graphical effects that have not been available before.

It's at version one and I feel that Dansoft should spend some time cleaning up the front-end before they start developing the graphics end further. If you want good Web graphics – or graphics for some other application – this program is a must. AU

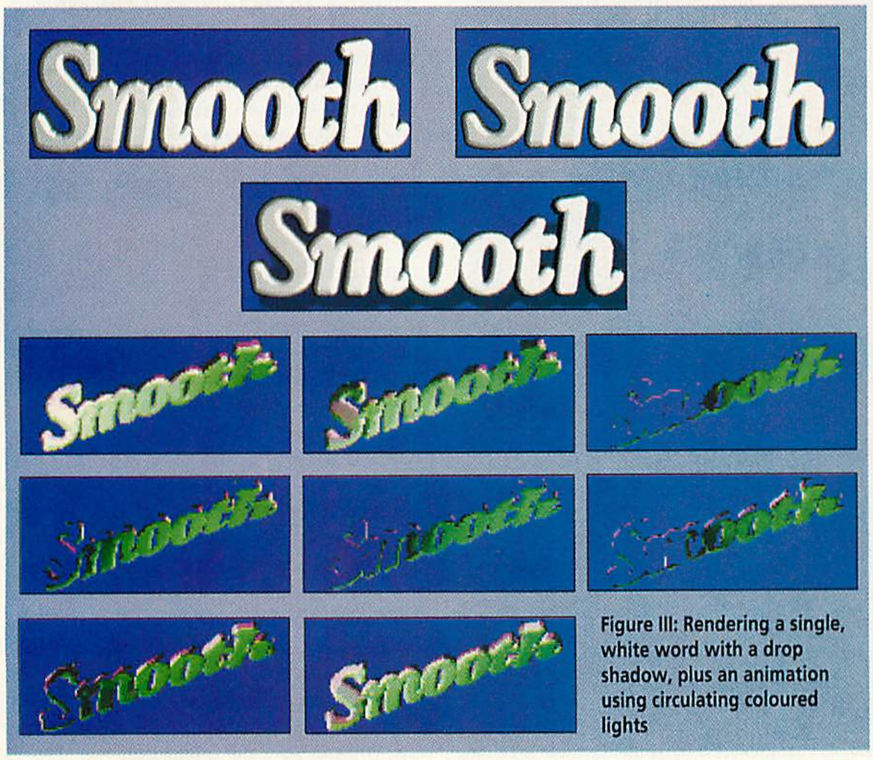


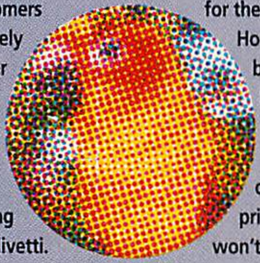
Figure III: Rendering a single, white word with a drop shadow, plus an animation using circulating coloured lights

Product details

Product:	WebFX3D
Price:	£34 (no VAT, inc P&P) Orders only accepted from UK or NZ at present.
Supplier:	Dansoft Developments, P.O. Box 18855 Christchurch, New Zealand.
UK Agent:	Dansoft Developments UK, P.O. Box 1955, Leigh-on-Sea, Essex SS9 5BF
Fax:	+64/3 388 4362
E-mail:	dansoft@dansoft.co.uk
Web:	www.dansoft.co.nz
Requirements:	Minimum 4Mb, RISC OS 3.1, hard disc. For serious work over 8Mb and StrongARM recommended.

For a long time the two undisputed inkjet printer leaders have been Canon and Hewlett-Packard. However, in the last year, Epson have been the leader of the pack in inkjet printer innovation and this year they have been joined by Lexmark, the former IBM-owned printer manufacturer.

Reviewers have been regularly showering awards on the latter two at the expense of the old favourites. Neither Canon or HP can match the top printing resolutions offered by either Lexmark or Epson. While the newcomers have not been able to compete closely in price terms with their much larger competitors, there are signs that disadvantage is on the wane. We'll be looking at Epson and Lexmark offerings next month.



This month, however, we're looking at two old favourites, Canon and Olivetti. Both have a history of co-operating on inkjet technology, or bubblejet as Canon prefer to call it. Unfortunately, both companies have fallen behind in the race to deliver higher resolution printing and other advanced features. The latest BJC-7000 answers many of Canon's critics, but on paper Olivetti don't yet have any models to bring it back to the level of the best inkjet offerings market. Olivetti's main attraction is price.

If Canon have been knocked off their perch, what went wrong? Some suggest that market leaders Canon and Hewlett-Packard have been caught basking in their earlier success. Hewlett-Packard appear to have concentrated more on colour printers for business use, where speed, text printing and quality for graphics like logos, graphs and charts has taken priority over photo-realistic printing. HP inkjet technology largely remains in the domain of 600dpi (dots per inch) resolution and the company were relatively slow in introducing so-called photo-realistic ink technology.

Canon, too, considered ultimate resolution less important than the way the ink was deposited on the page. One area in which Canon remains supreme is mechanical refinement, a legacy, perhaps, of their micromotor technology developed for their conventional camera division. However, even there, Canon's lead is being eroded by Lexmark, whose latest 5000-series printers boast a novel paper feed system which is both quiet and so precise that you can feed a page through twice while printing the same document and you won't be able to see any ghosting.

When we asked Canon to respond to the suggestion that they had lost their grip on the inkjet printing quality lead, we were told that quoted resolution was not the be all and end all. One HP representative we spoke to at a trade show even claimed 300dpi tested the limits of the eye's visual acuity, which is plainly nonsense.

Canon say they have worked very hard to perfect their inkjet spot positioning capability, dithering routines and both the ink formulations and specialist papers. That may be true, but Canon (and HP) inkjet printers are still being rated lower than Lexmark and Epson models by the test labs of the computer press.

Canon BJC-7000

Win a BJC-7000
Turn to page 81

Canon are back with a vengeance with the new BJC-7000. This printer takes bubblejet technology to new heights. The BJC-7000's optional P-POP (Plain-Paper Optimised Printing) BC-62 photo cartridge uses *six* primary colour ink shades plus black instead of the more usual five and adds a unique ink 'conditioner' which is designed to prevent the ink from being absorbed too rapidly by the paper.

This should reduce the effect of fibres in the paper absorbing the ink along their length, causing spidery or feathered dots. It should help maintain contrast and brightness without the express need for expensive inkjet paper.



All that's fit to

Canon BJC-250

The Canon BJC-250 lies at that budget end of the market. You could buy nearly three BJC-250s for the price of one BJC-7000. Yet despite this, you can add optional extras like a photo cartridge and even fluorescent ink cartridge – useful for producing posters or way-out graphics. Canon also expects BJC-250 owners to use their printers for producing T-shirt and other fabric transfer designs. The 250 is also a very compact design which takes up very little desk space.

With only a maximum resolution of 360dpi, the BJC-250 does not pretend to be a high-quality photo-realistic printer. However, when you realise this printer sells for close to £100 + VAT in basic form, you should be aware of that old adage – you get what you pay for.

In this case, the photo cartridge is not really comparable to others we have looked at as intermediate inks are not used.



Olivetti JP 90

The Olivetti JP 90 is one of the smallest A4 inkjet printers on the market. It's a monochrome inkjet which can be upgraded using a colour kit. With the colour cartridge fitted, only three colours are provided so 'black' will be a composite colour rather than a true black.

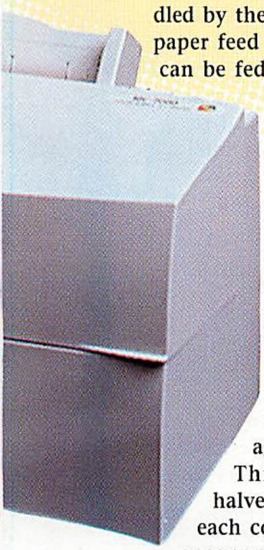
Portability is its main asset, as a NiMH battery pack is available and this can print up to 140 pages on a single charge. A cheaper NiCad pack is also available but this cuts print capacity per charge by nearly 50 per cent. That figure is likely to be much lower when printing solid graphics rather than plain text. A European journey planner application, called *Visual Map*, is supplied with the printer as standard, but this is only of use if you are running Windows.

Colour resolution is limited to just 300 dpi, making this printer only suitable for

Theoretically, continuous tone reproduction should be better than ever as all three base colours, Cyan, Magenta and Yellow are provided in two shades using the BC-62 cartridge.

Indeed, Canon claim that photos printed on a 7000 using high-gloss paper will look indistinguishable to real photos when viewed from a distance greater than 15cm. The 7000 also marks Canon's arrival at the dizzy heights of 1200dpi level, if only in one dimension as the true resolution is 1200x600dpi. A nice feature is A+ mode which enables the complete width of an A4 sheet to be printed free of any border.

Paper up to 550gsm – that's actually heavier than business card – can be handled by the 7000 via its straight-through paper feed facility. Paper up to 105gsm can be fed via its 130-sheet feeder and envelopes are also catered for. 1200x600 dpi printing in text mode can reach a speed of 4.5 pages per minute. This rate is a substantially reduced 0.1 pages per minute when printing complex graphics and photos in the highest quality mode.



Canon quote a figure of 320 pages as being the capacity for the standard BC-61 colour cartridge at the average coverage of 7.5 per cent of the page. This will probably be nearly halved with the BC-62 cartridge as each colour-well is halved in size to accommodate the extra shades. The BJC-7000 will work best using Windows 95 drivers via a PC card. However, an Epson LQ-2550 emulation is also supported. Acorn have traditionally prioritised Canon for RISC OS driver support and hopefully this will bring a quick native solution for Acorn users aspiring after the BJC-7000

Physically the BJC-7000 is a very large beast, almost twice the width of the A4 paper it prints. However, unlike some others in the Canon bubblejet family the BJC-7000 is sturdily built and is classified as a 'professional' printer by Canon, which implies it is built to last.

Without a doubt, the BJC-7000 was designed to re-position Canon back at the head of the inkjet printer roll of honour. Technically, it's a fine attempt, but test results were perhaps underwhelming considering the technological punch this printer packed.

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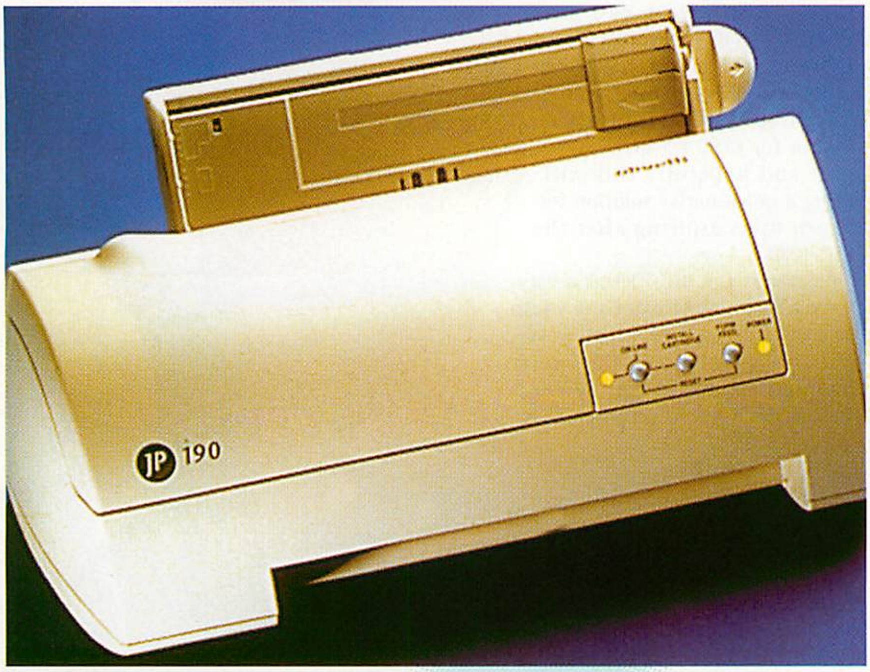


print –part 3

Ian Burley and **Jack Kreindler**



charts and simple artwork – photos will be poorly reproduced. Mono resolution is a better 600x300 dpi, providing reasonable text quality. HP PCL3+, Epson LQ850 and IBM Pro Printer emulations are supported.



Olivetti JP 190/192

In the middle of Olivetti's range is the JP 190. As with some of its stablemates, there are in fact two models, the JP 192 being supplied as standard with a colour cartridge.

Resolution is 600x300 dpi, so photo quality isn't likely to be very good, but text output should be reasonable. There is no photo cartridge available for this printer. Compared to the bulky JP 792, the JP 190 series is compact and neat with a small desktop footprint. Up to 40 sheets of paper can be stored in the sheet feeder.

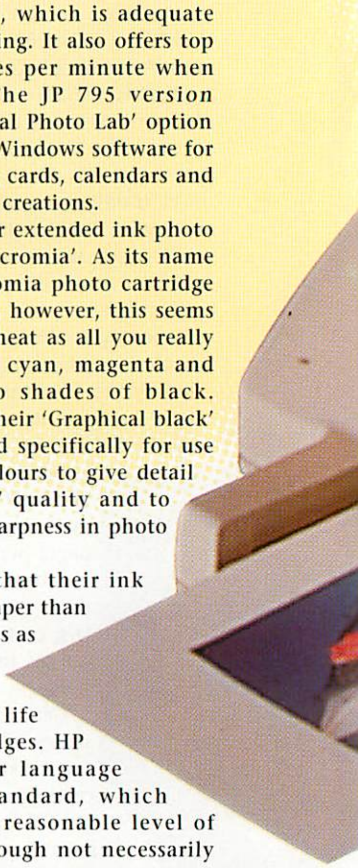
As with the JP 90, with the colour cartridge fitted, only three colours are provided so 'black' will be a composite colour, which can be rather muddy looking compared to a true black. The JP 190 is cheap and cheerful, but no photo printer.

Olivetti JP 792/795

The Olivetti JP 792 is at the top of Olivetti inkjet range. Its maximum resolution is 600dpi, which is adequate rather than stunning. It also offers top speed of six pages per minute when printing text. The JP 795 version includes a 'Personal Photo Lab' option – which includes Windows software for designing greeting cards, calendars and other image-based creations.

Olivetti call their extended ink photo technology 'Pentacromia'. As its name suggests, Pentacromia photo cartridge uses five 'colours', however, this seems to be a bit of a cheat as all you really get are the usual cyan, magenta and yellow plus two shades of black. Olivetti say that their 'Graphical black' ink was developed specifically for use with the other colours to give detail extra 'chromatic' quality and to enhance image sharpness in photo mode.

Olivetti claim that their ink cartridges are cheaper than some of their rivals as the print head is separate and can be used over the life of several cartridges. HP PCL III+ printer language emulation is standard, which should ensure a reasonable level of compatibility, though not necessarily



Printer comparisons



The first major breakthrough in desktop colour printing came over five years ago with the entrance of low-cost inkjet printers.

At this time, the best desktop colour printers boasted resolutions of 300 to 360 dots per inch (dpi) which, compared to the front-runners of today, seems poor. Graphics users have recently enjoyed another breakthrough in colour printing in the form of 'photo realism'. Most colour inkjet manufacturers now claim that their 1200 or 1400 dpi printers, using anything from five to seven colour ink systems, can produce prints indistinguishable from photographs at arm's length. While some manufacturers are well justified in their claims and have proven themselves over time, others are relatively new to the game and appear to have used the hype for sales purposes but still use old technology.

We must make it clear that these printers were not reviewed using RISC OS printer drivers. It is much to the shame of the platform that neither Acorn nor any third-party has kept up with the technological breakthroughs in printing and written software to fully utilise the potential of the latest inkjets. However, many users have PC co-processors or podules in their machines and have taken advantage of Windows printer drivers.

For this review a Risc PC was used with a 100MHz 486 PC second processor running Windows 95 and CorelXara as the graphics software because of its ability to load *ArtWorks* or *Draw* EPS files and print bitmaps exported from RISC OS packages without fuss. For bitmap artwork and vector graphics this is fine but unfortunately printing DTP files from RISC OS software like *OvationPro* will have to wait until Acorn or someone out there writes the drivers.

The battle

The printers on test were not all in direct competition. The BJC-7000 and the JP 792

in 'photo' mode. Overall, this printer has an unexciting specification, though it did better than we expected in quality tests.



Product details

Availability: Contact your local dealer

Canon	Tel: 0121-680 8062
BJC-7000	£269
BJC-250	£99
Olivetti	Tel: 01908-220111
JP 90	£138
JP 190/192	£89/£89
JP 792/795	£134/£153

All RRP (ex VAT) correct at time of going to press

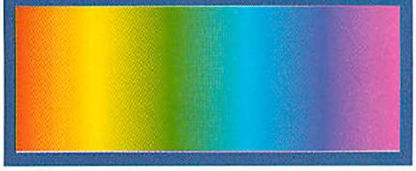
Printer Definition Files:
The Cybervillage site (http://www.cybervillage.co.uk/acorn) is a good source of up-to-date info

The test page

The test page (see next page) comprised of six photographic images, several colour test strips with colour blends and gradations, a complex colour vector graphic and plain black text ranging from 14pt to 6pt. This put unusually high demands on the printers which in normal use would not be expected to reproduce such a variety of graphics except, perhaps, in DTP.

As we have to show the output at it's original size to show the true results we only have space to show some of the graphics, although the results of the test are outlined in the table at the end of the test page.

All the printer drivers offered settings such as Vector Graphics, Line Art, Photo, Vivid and such like, altering colour balance and ink density across the whole page. But it is no good buying a printer that can only satisfactorily print vector graphics and bitmaps separately, especially since existing and forthcoming graphics packages for RISC OS allow composition of both vector and bitmap artwork.



both claim to be photo-real printers using twin printheads, one black and one photo-colour cartridge and so were tested against each other. The BJC-250 and JP 190 are both single cartridge desktop printers, while the JP-90 being a portable printer, like its rival Canon BJC-80 which was not on test, was assessed individually.

Setting up & use

The printers on test used either a single colour cartridge or separate colour and black cartridges. The BJC-7000 and JP 792 both had the latter configuration and required a printhead alignment procedure before using the printer. The only other hurdles encountered were the minor irritation of the Canon BJC-7000 regular head cleaning regimen and the BJC-250's more serious problem of occasional banding from excess ink deposition. The Olivetti JP 792 was not very happy with paper feeding with only one sheet in the tray but apart from that was trouble free, and was the fastest printer on test.

Software

Canon are renowned for their very comprehensive printer driver applications. Beside the standard paper size, type and print quality settings, there is also a full window dedicated to CMYK colour balance (though interestingly there was no Gamma correction) and colour matching. If I had to make a complaint it would be that the number of different areas and windows made the application fairly difficult to navigate at first. The BJC-250 software is essentially the same as its big brother's but with fewer bells and whistles. The Olivetti drivers were easy to understand and simple to navigate and also included colour correction and balance adjustments.

Discussion

Without beating around the bush, there is one clear winner here. The BJC-7000 is a big A4 plus printer with the capability of producing output quite indistinguishable from some types of photographs. Those types of image include light tones, flesh tones and vivid colours and I am certain that with careful, but time-consuming experimentation using the colour correction settings in software the problem with rapid over-saturation of colour going from mid to dark tones could be reduced.

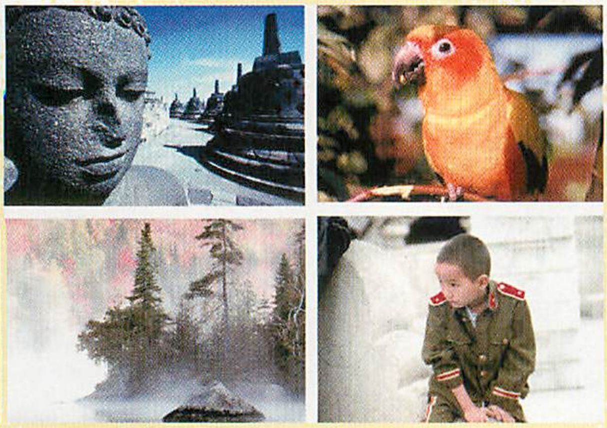
It is a much more heavy-duty and more flexible printer than the JP 792 which is only A4 and cannot handle the same variety or weight of media. My only real quality issue with this particular Canon is the subtle 1mm mid-tone banding seen on close inspection, which is only an issue in the light of the excellent reproduction of everything else.

The Olivetti JP 792 is the best printer for text here and its image output, though not competing with the big Canon, certainly compares well against the BJC-250 which with its CMY (and no black) ink cartridge produces a rather washed-out output and poor text despite printing excellent light tones and smooth colour gradations.

The Olivetti JP 190 was definitely outclassed in this company. It represents old technology and its prints are vastly inferior to anything else on test here. Its similar but smaller JP 90 produced similar results but was slower and even in rough comparison to the old portable Canon BJC-70 did not fare well at all.

Before you rush off and buy a BJC-7000, note that there are still two more manufacturers of graphics printers that will be featured in next month's *Acorn User*. Also, be wary of prices as photo-cartridges may not come as standard and the media needed to yield the best graphics output comes at a premium. Epson and Lexmark are currently the market leaders in technology and even their lower-end models are generally thought to challenge the quality of the BJC-7000. Will they be faster, higher quality and cheaper? Tune in next month and see.

Canon BJC 7000



Mid-to-dark tones may be problematic
Produced vivid colours
Excellent light and flesh tones
Vector colour gradations as good as a dye-sublimation printer

Canon BJC 250



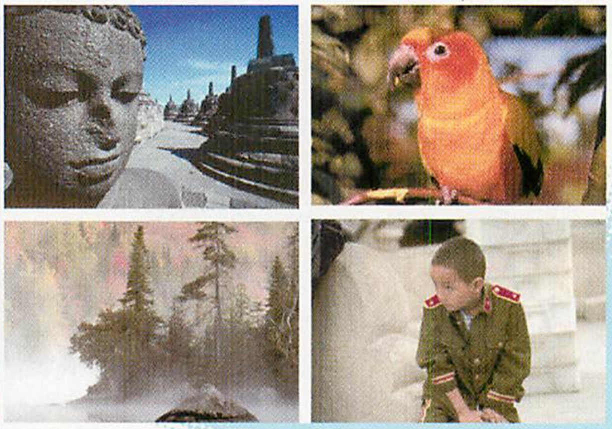
Blacks appear washed-out as there is no black cartridge
Vivid colours – but a little lacking in contrast
Produces good skin tones
Occasional quality problems

Olivetti JP 190



Poor colour reproduction – notice the flooded colours that are too dark
Very coarse dithering
Poor resolution
Produced muddy text

Olivetti JP 792



Good contrast – look at the deep skies
Vivid colours although a little flat
Good consistent output, but visible dithering and quite dull overall
Produced superb laser-quality text

TEST PAGE RESULTS	PRINTER MODEL			
	BJC-7000	JP 792	BJC-250	JP 190
SPEED (to print test sheet)				
Photo quality	20 mins	12 mins	/	/
High quality	15 mins	12 mins	15 mins	15 mins
GENERAL OBSERVATION				
Photo-real at arm's length?	Yes	Grainy	Pale	No
Artefacts	None	Fine Dithering	Fine Dithering, Banding	Coarse Dithering
Overall colour matching	Excellent	Good	Pale	Very Dark
BITMAP GRAPHICS				
Resolution and detail	Very good	Good	Average	Poor
Light tones	Excellent	Good	Good	Average
Mid tones	Very good	Good	Good	Average
Dark tones	Average	Average	Poor	Poor
Flesh tones	Excellent	Average	Good	Poor
Vivid colours	Excellent	Good	Good	Poor
Contrast	Excellent	Average	Poor	Average
Colour gradations	Excellent (not mid to dark)	Very good	Good	Average
VECTOR GRAPHICS				
Colour gradations	Excellent (not mid to dark)	Average	Good	Poor
Line art quality	Very good	Very good	Average	Poor
TEXT				
Sharpness	Very good	Excellent	Average	Average
Density	Good	Excellent	Poor	Average

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E.Mail: sales@davyn.demon.co.uk
WEB: http://www.davyn.demon.co.uk

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Publisher irregular frames		
Hero Quest	(Krisalis)	£15.00a
Landmarks full range	(LL)each	£28.00a
Music Box	(Topo)	£20.00a
Number Tiles	(Topo)	£17.00a
PhotoBase1930s,50s,60s Each	(LL)	£39.00a
Prime Mover	(Minerva)	£20.00a
Pro Artisan 2	(Clares)	£90.00c
Pro Driver	(Ace)	£10.00a
Science Series CDx3	(YITM)	£40.00a
Small	(Virgo)	£15.00a
SmArt	(4Mation)	£37.00a
SmArt Files	(4Mat)each	£17.00a
SmArt File Mod.Lang.	(4Mat)	£21.00a
StartWrite	(AP)	£8.00a
Tiny Puzzle	(Topo)	15.00a
Waiter	(Digital)	£15.00a

Spares & Repairs

A300/400		
backplane 2/4 pod	S/U	£30.00b
memory upgrade 2mb	new	£79.00a
memory upgrade 4mb	new	£89.00c
Power Supply	Refurb/Exch	£40.00c
A400/1		
backplane 4 pod	S/U	£30.00b
Floppy Drive	S/U	£30.00b
memory upgrade 1mb	new	£35.00a
Power Supply	Refurb/Exch	£40.00c
A3000		
Floppy Drive	S/U	£30.00b
High Density Floppy Drive	new	£90.00c
Keyboard	S/U	£20.00b
memory upgrade 2mb	new	£39.00a
memory upgrade 4mb	new	£65.00a
PCB	Refurb/Exch	£90.00d
Power Supply	Refurb/Exch	£30.00c
Power Supply	Refurb	£40.00c
A3010		
Floppy Drive	new	£89.00c
Keyboard	S/U	£20.00b
memory upgrade 1-2mb	new	£34.00a
memory upgrade 1-4mb	new	£65.00a
PCB	Refurb/Exch	£120.00d
A3020		
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Keyboard	S/U	£20.00b
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A4000		
Floppy Drive	new	£90.00c
Harddisc 210MB IDE	S/U	£80.00c
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Power Supply	Refurb/Exch	£40.00c
A5000		
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PCB	Refurb/Exch	£139.00d
Power Supply	Refurb/Exch	£40.00c
RPC		
PCB MK 2	Refurb/Exch	£149.00d
Power Supply	Refurb/Exch	£60.00c
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These are just a small selection of new and refurbished spares ring for details

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Canon		
BJC-250	(colour)	£129.00d
BJC-4300	(colour)	£169.00d
BJC-4650	(A3 colour)	£299.00d
BJC-620	(colour)	£229.00d
Epson		
Stylus 400	(colour)	£159.00d
Stylus 600	(colour)	£199.00d
Stylus 800	(colour)	£289.00d
Stylus 1520	(A3 colour)	£729.00d
Hewlett Packard		
DeskJet 400L	(colour)	£99.00d
DeskJet 690C	(colour)	£189.00d
LaserJet 6L	(Black)	£329.00d
Calligraph		
A4 1200 Laser	(black)	£1099.00d

Printer Inks/Refills

COLOURS INKS AVAILABLE
Jet Black, Cyan, Magenta, Yellow, Brown, Dk Green, Lt Green, Dk Blue, Dk Red, Lt Red

Inkjet Refills are an economical way of re-charging your existing cartridge All inks come complete with gloves, syringe and easy to use instructions.

Single	20ml	Any Colour	£6.00a
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Bulk	125ml	Any Colour	£21.00b

'CartridgeMate' A new and easy to use cartridge refill system for HP 51626A high cap. cartridges

A refill system with no mess

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C/M & Y Inks, Cap Retaining Clip
Cartridge Cap Remover £30.00a

We also carry a large stock of inkjet cartridges and ribbons

EP-L Toner for LBP-4	£69.00c
EP-E Toner for LBP-8	£79.00c
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Printable Items

Colour'n Wear (2 white Baseball Caps + 3 transfer papers)	£10.50b
Colour'n Wear (2 white T Shirts + 4 transfer papers	£13.50b
Colour'n Wear (4 transfer papers only)	£9.00a
(10 transfer papers only)	£13.50b
Design & Print Mouse Mat	£4.00a
Col Inkjet matt photo white paper 25 sheets x 120gms	£5.50b

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A7000+		8m 1.2GB HD	8xCD	£849.00d
RiscPC	233	4m 1.2GB HD		£949.00d
RiscPC	233	10m 1.2GB HD	8xCD	£1249.00d

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Extended Warranty

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A7000 / A7000+ 5 years	£188.00
RPC StrongARM 3 years	£235.00
RPC StrongARM 5 years	£470.00

Monitors

Acorn AKF60	£264.00d
Acorn AKF92	£640.00d
Iiyama 17"MF8617E .26dot	£399.00d
Samsung 15" Syncmaster	£179.00d

Memory

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RiscPC 32Mb RAM	£79.00c
RiscPC 1Mb VRAMsimtec	£59.00c
RiscPC 2Mb VRAMsimtec	£95.00c

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586-100 PC Upgrade	£350.00d
586-133 512k PC Upgrade	£360.00d
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Strong Arm upgrade 233	£289.00c
Audio Mixer	£39.00a
Movie Magic	£279.00c
Risc OS 3.7 Chips + Software	£58.00b
Second Slice *no PSU*	£90.00d
Second Slice *with PSU*	£116.00d
Sound Card	£69.00b

Hardware Upgrades

170mb IDE 2.5" HD	£65.00c
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Casio QV-11 inc.Software	£376.00d
Casio QV-100 inc.Software	£519.00d
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Lark Midi Sound-Sa.	£172.00c
Risc OS 3.1 Upgrade Chips	£30.00a
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Teletext module for above	£45.00a
SCSI 16bit	£110.00c
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VAT is included:

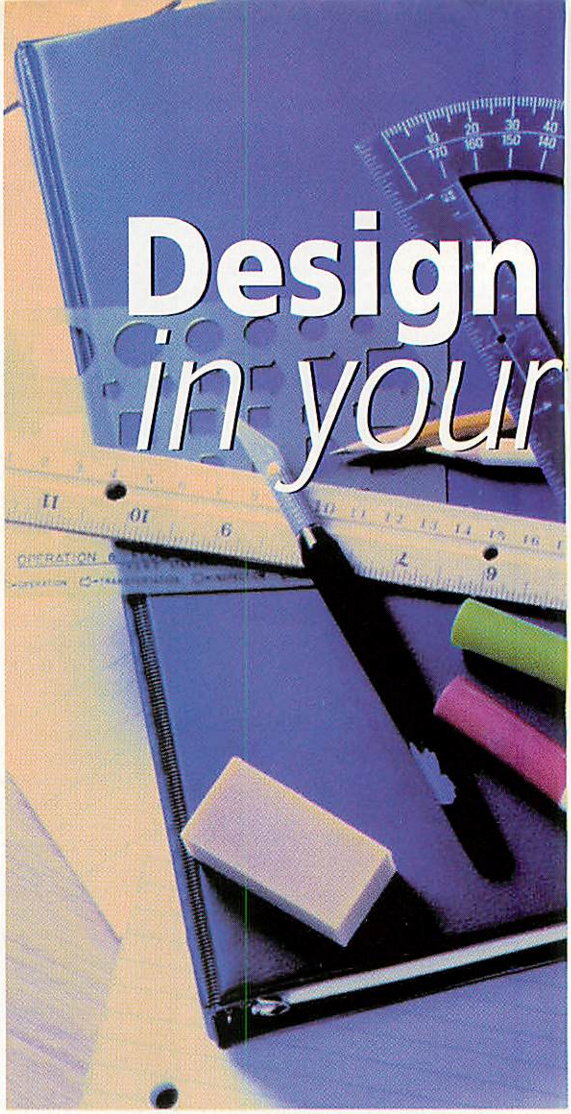
Order Address: please send your orders to;
Davyn Computer Services
'The Workshop'
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E.&.O.E 18th June 1998

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Stephen Scott expresses himself even further with *HyperStudio*

Cross-platform capability is a contentious issue with any program that attempts to move its own file format between different computers. Different font handling, different monitor display settings and different operating systems conspire against *HyperStudio*'s intended portability between platforms.

The Acorn format is very different to the Mac/PC format, but TAG tell me that there are still problems in transferring stacks between the Mac and PC, so in a sense we are not alone! Despite the cross-platform niggles, a large number of triple platform products have been authored with *HyperStudio* with notable success, so it is a case of being aware of the existing limitations and how to overcome them. TAG can provide you with a booklet on cross-platform development on request.

The Acorn version produces foreign stacks if the user adds an /STK suffix at the end of the stack filename in the save box. In an instant, the file icon changes to the standard DOS filer icon and can be saved to any DOS, Mac or NT accessible medium. TAG recommend that you test your stacks extensively on each platform before you unleash it on an unsuspecting world, otherwise you will end up with egg on your face, like I did.

One notable addition to the menu structure is 'Stack Export Options', whereby you can set up the Mac or PC path names for easier location of external resources that your stacks may require. The presence of this option removes the potential for cross-platform disaster in stack transfer. I have not tried this new option but am confident that it will work well.

The Acorn version will also accept stacks created with either the Mac or PC version, opening up a wide library of existing material, but certain aspects of the transfer may fail and some external resources may not be supported, such as perhaps *Quicktime* movies. Most of the example stacks provided on the CD-ROM were sourced from the other platforms, but have been tweaked by TAG to work properly on the Acorn.

If you wish to know more about the current condition of *HyperStudio* in this and other respects, contact TAG for more details, using the methods listed at the end. Cross-compatibility is a convoluted and frustrating subject that is outside the scope of this review, but take a look at my websites for more information.

Stack distribution

Once you have finished your stack and tested it thoroughly you can distribute it to the wide world. For this purpose, the run-only stack player application is provided.

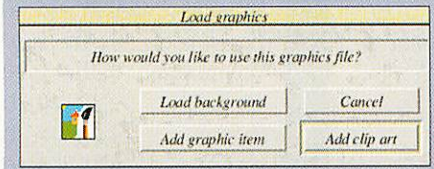
Versions exist for each platform so, if they are distributed alongside your stack, anyone can view it. Each copy of the player, as well as the software, is engraved with your name and registration number. As long as you register your

Creating multimedia with HyperStudio

The example shown here could be a touch-screen in a supermarket explaining how to choose the right cosmetics for your skin type. The following describes how to put the graphic, textual, interactive and audio visual elements together to create the final result. What you see here took about half an hour to put together, except the movie and graphics which were produced from an earlier project.

Step 1

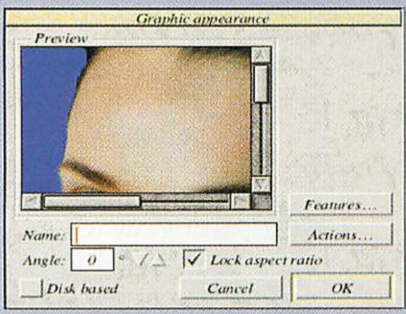
Having defined a stack, it's time to import the graphics. This dialogue lets you choose whether



the graphic is a background, a movable object, or a movable clip art which will then glue to the background. I have selected graphic item, for easier editing and positioning.

Step 2

The graphic item is imported into the Graphic



appearance dialogue box. Give the item a name using the name writable icon, or attach an action to it using the same Actions dialogue box as that of buttons.

Step 3

Positioning and resizing the selected graphic using the handles positioned half way down the sides and at the corners of the image.



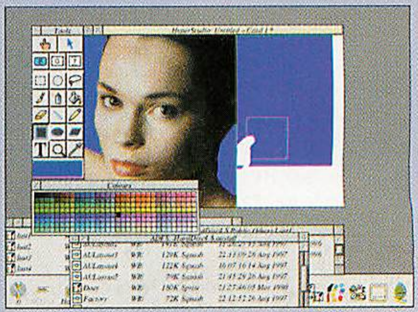
Step 4

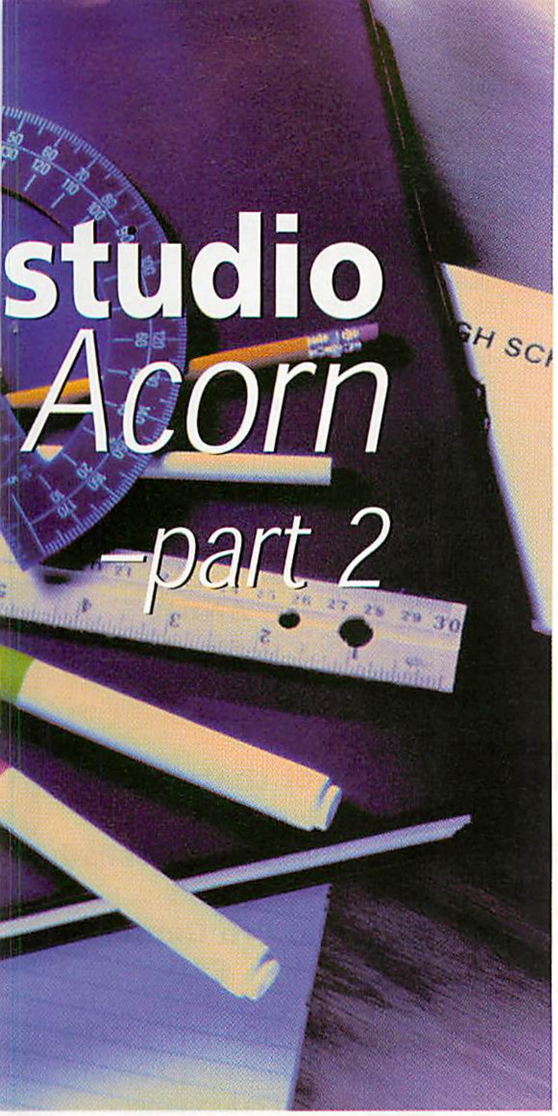
The graphic is now positioned correctly, but the white area on the right hand side needs to be



changed to blue, to suit the image's background.

Step 5





copy, you are free to distribute the players in any way you wish, with the exception of commercial gain, for which you will need to obtain a licence agreement from TAG. This is actually free to obtain, although you are asked to submit two copies of the final product to them in return.

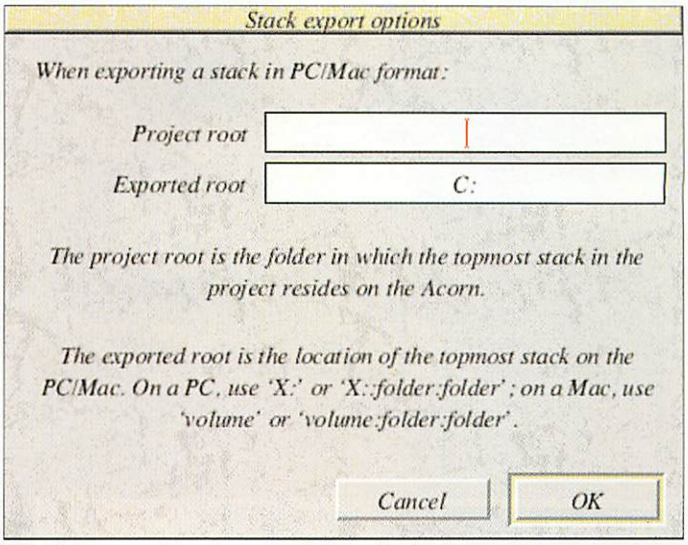
Conclusion

This article has barely scratched the surface of what is, on principle, an excellent package. When I was using the previous version for the *Acorn User* CD the keyboard shortcuts did not always function. Most of the time the menus displayed the shortcuts but, on occasion, displayed only the ^ part, rendering them useless. I had to resort to traversing the menu structures to activate the desired operation. It was very annoying, but in the short time I have used 3.01, no such problems occurred.

Again, while producing the *AU* CD, I regularly found myself crashing the program rather inexplicably, with one phrase '(memx11)' among various error messages, before dumping the whole program.

The error may have related to lack of memory, as I was using an 8Mb A7000+, with *HyperStudio* and *Photodesk* running together on the desktop at the time. However, an option to at least save your work before losing it would have been welcome. Again, in the new version, this bug did not appear but I was using a 32Mb Risc PC this time, so the extra memory may have affected it.

A welcome change is the increased amount of example stacks from Britain and other non-American countries. Earlier editions practically waved the stars and stripes in your face and the work itself was rather lacklustre (not dis- ➤



There is extra provision for cross-platform distribution, as this new addition, the Stack Export options window, proves

Having selected the right colour from the palette, double-click the rectangle icon on the toolbar to toggle it to filled shapes. Click, drag and release a rectangle over the white area, and...

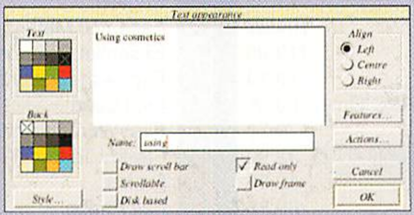
Step 6



...voila – we have a blue backdrop. Now to add some text...

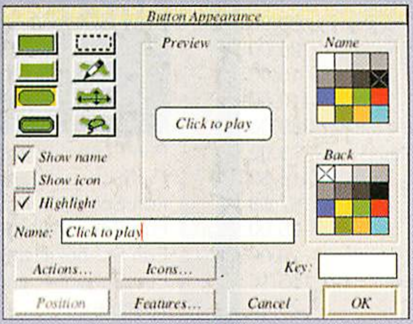
Step 7

Selecting Add a text object from the Objects subitem of the main menu brings up the text item window. Enter your text and use the icons provided to select the size and style of the text. The Features button allows transparent backgrounds for text, among



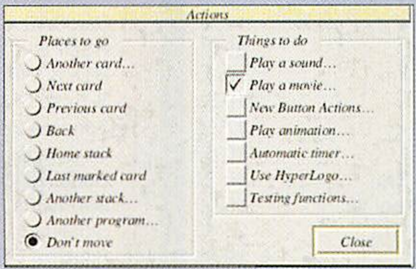
other things, while ticking the Read-only checkbox prevents the text from being editable.

Step 8



With the text correctly positioned, it's time to add a button to play the movie. Selecting Add a button from the same Objects submenu brings up the Button dialogue box, where the buttons appearance and interactivity with the user can be defined. Type the desired text into the Name writable, choose an appropriate border for the button and then click the Actions icon, to bring up...

Step 9



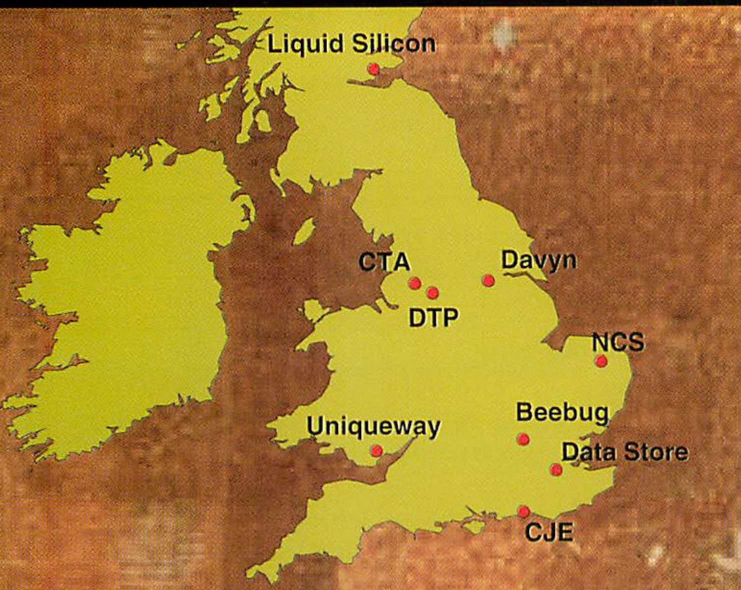
...the Actions dialogue window. Here you can decide what happens when the button is clicked on. We don't want our button to take you anywhere, just to play a movie. Tick the Play a movie checkbox, and...

Step 10

...yet another dialogue appears, this time to control movie attributes. Drag your Replay (or, if you have *MovieFS*, a *Quicktime* or other format movie) file into the window, and the ➤

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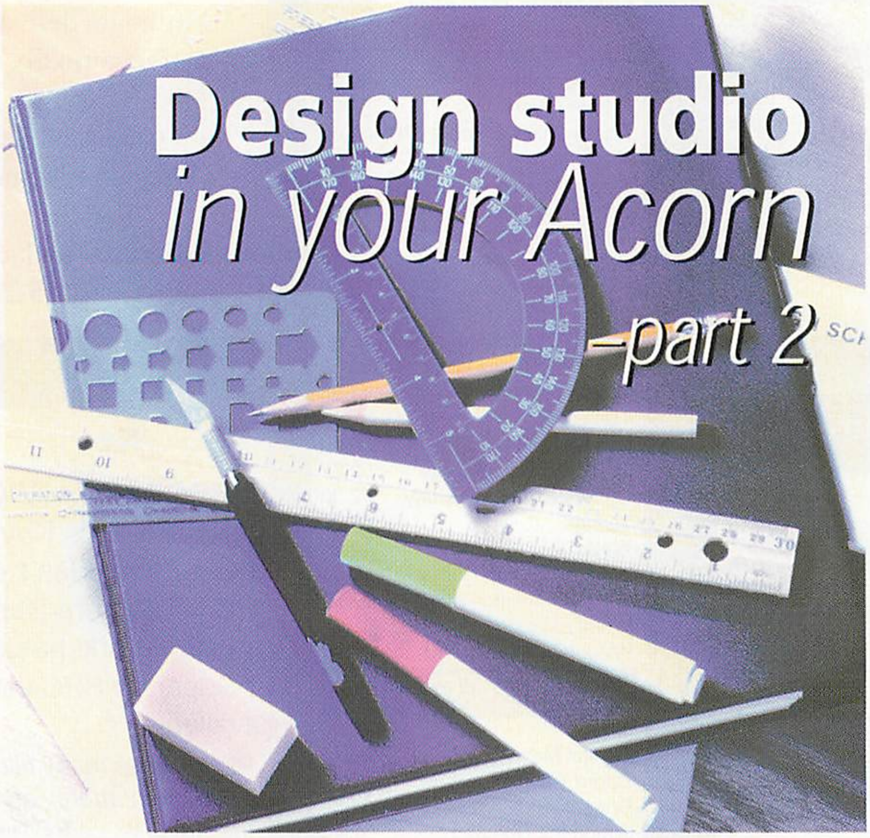
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Design studio in your Acorn –part 2



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➤ crediting American tastes here, you understand). Work is considered for inclusion in future releases – an excellent incentive for wider exposure.

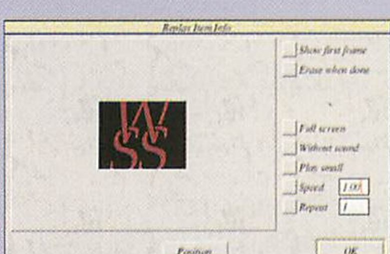
HyperStudio is an excellent package, slightly frayed around the edges by minor bugs. However, with TAG's constant development, the aforementioned snags can be (or may already have been) rectified, making it an absolute essential to all Acorn users wishing to create multimedia software. Even as it stands now, great pieces of work can be produced with it. The fact that it takes full advantage of the RISC OS multitasking environment makes its use a far more pleasurable experience than it can ever be on the Mac and PC versions.

It is certainly not comparable with *Macromedia Director*. It is not intended to be. *Director* is far more advanced and has a price tag in excess of £700. *HyperStudio* forsakes complexity for outright simplicity and, in doing so, succeeds. The attention to detail and design is spot on. Considering the relatively low price tags, *HyperStudio* delivers on every level in spades.

To conclude, I would gladly utilise *HyperStudio* for my future project work. And if I were to choose between the Mac, PC and Acorn versions, I would definitely choose the Acorn one – it feels far easier to use, its OLE editing facility makes tinkering quick, easy and elegant in execution, and damn it, it should have been made for the Acorn in the first place. AU

Creating multimedia with HyperStudio (cont.)

➤ first frame of it will appear, in this case, the WSS logo of *MovieFS* (the movie has been



converted to Replay format using *MovieFS*).

Clicking on the Position icon allows you to place the movie anywhere on the stack. We'll place it under the text on the right hand side of the screen.

Step 11



Having positioned the movie, clicking OK in the Button dialogue box, will attach the movie to the button. Now it is just a case of moving the button to below the movie, achieving the final result.

Step 12



Now to watch the final result; rewind the movie using the move to card pane attached at the bottom of the stack window, and select the browse tool (the hand) in the top left of the tool pane. Now click on the button, and the movie will play. Don't forget to save the stack - this one was only one card, with the movie as an external resource. Movie and audio files are considered too large to be included within stack files.

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Web enhancement

Weaving the



The World Wide Web is a vast resource, partly because it is so easy for ordinary people to add their own pages – often at no extra cost, as many Internet providers offer Web space as part of their package. If space does not come with an account it is not too difficult to find some elsewhere for free.

Usually this "homepage" Web space has only limited facilities, allowing static pages, perhaps with a standard hit counter to show how often a page is viewed. There may be image maps to allow visitors to move to other pages in a free-form way and a simple response form, but often no access to the more interesting programmable and logging facilities.

This article looks at ways to get round some of these restrictions and how to add bells and whistles to enhance homepages and get them noticed. Everything described is free, but there is generally some sort of commercial motive behind the service.

Who's visiting?

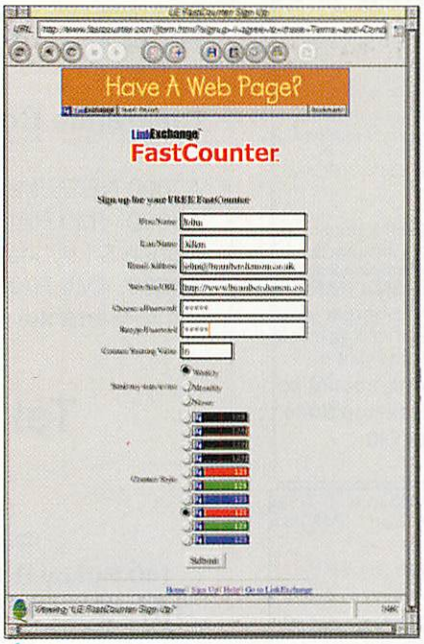
Commercial Web customers are able to track who has visited their site. For administrative reasons, information about visitors is not generally made available for non-commercial users. It is possible, however, to identify visitors to a homepage site by using a logging service on another site.

Logging services work by having a small graphic in the user's page which is stored on the logger's site. Whenever the page is viewed the picture is requested, using an identifier unique to that page. Information about requests is stored and made available at a later date, perhaps with some analysis of them. As this is potentially such a useful service I will describe three different providers, each giving a different range of services.



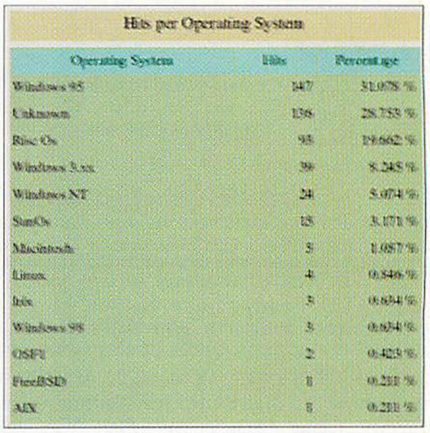
First, *Captain's Log*. Users get a weekly e-mail for each page they register, with the time and date of access and the visitor's site address. A more advanced chargeable service was planned but that has since been abandoned. Adding the name of the browser used by each visitor is currently under test and may be a part of the service by the time this article is published.

Captain's Log is available from: http://www.room101.co.uk/captains-log/ There is a form to fill in and a choice of *Captain's Log* logos to incorporate into the page. Finally, the necessary HTML code is generated and displayed – ready to be cut and pasted into the user's page. If text cannot easily be cut in your browser, save the text of the whole page to *Edit* and copy the relevant section from there. This style of registration and automatic generation of HTML is typical of the services described in this article – it is not necessary to understand how these add-ons work to use them.



A second way of tracking visitors is Link Exchange's *FastCounter*. This does not provide as much information about individual hits as *Captain's Log*, it simply gives the number of visits per day. However, the graphic returned is an updating hit counter so it is well worth considering if you have no other way of counting visitors.

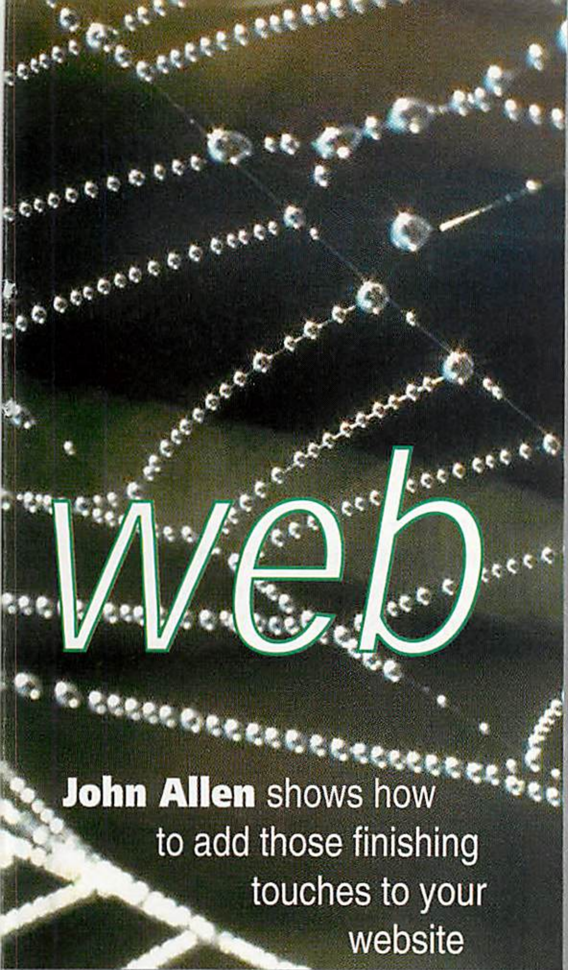
FastCounter can be found at http://www.fastcounter.com In this case you register a password and view the statistics via your browser. You also get periodic e-mails.



Hits per Operating System

Operating Systems	Hits	Percentage
Windows 95	147	31.078 %
Unknown	136	28.753 %
Risc Os	93	19.662 %
Windows 3.xx	39	8.245 %
Windows NT	24	5.074 %
SunOs	15	3.171 %
Macintosh	5	1.057 %
Linux	4	0.846 %
Irix	3	0.634 %
Windows 98	3	0.634 %
OSF1	2	0.423 %
FreeBSD	1	0.211 %
AIX	1	0.211 %

ShowStat is a very comprehensive logger and analyser but access to its server can sometimes be a little slow and often visitors have moved on to another page before the visit is recorded. It can be found at http://www.showstat.com The statistics it produces are in the form of a huge array of



web

John Allen shows how to add those finishing touches to your website

Hits per Hour					
Time	Usage	Graph	Time	Usage	Graph
00:00 - 00:59	1.06 %		12:00 - 12:59	5.50 %	
01:00 - 01:59	1.69 %		13:00 - 13:59	5.92 %	
02:00 - 02:59	1.69 %		14:00 - 14:59	5.92 %	
03:00 - 03:59	2.96 %		15:00 - 15:59	3.81 %	
04:00 - 04:59	1.69 %		16:00 - 16:59	5.29 %	
05:00 - 05:59	1.27 %		17:00 - 17:59	5.07 %	
06:00 - 06:59	1.27 %		18:00 - 18:59	4.86 %	
07:00 - 07:59	1.69 %		19:00 - 19:59	5.07 %	
08:00 - 08:59	5.29 %		20:00 - 20:59	5.29 %	
09:00 - 09:59	6.77 %		21:00 - 21:59	5.07 %	
10:00 - 10:59	6.13 %		22:00 - 22:59	7.82 %	
11:00 - 11:59	4.86 %		23:00 - 23:59	4.02 %	

graphs. They can be seen by all visitors to your site if they click the *ShowStat* icon on your page. It collects information about operating systems being used, country of origin and Web browsers as well as time bands and dates of users.

It also displays the latest 10 accesses in raw form. Interestingly, the raw entries tell you the name of browsers used by visitors but in the statistics they are classified as Microsoft Internet Explorer, Netscape and Others – no use for tracking the use of Acorn browsers.

Banner exchanges

Often sites advertise others and clicking on the advertisement takes you straight to those sites.



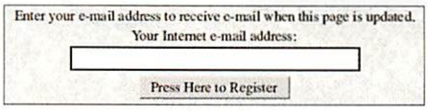
These ads, normally long and narrow, are known as banners and are often supplied by a banner exchange site – a different banner is displayed each time the page is viewed. Every time you display a banner for someone else you gain entitlements to have your banner supplied to other people's pages, and so have an opportunity to draw people into your site. After registering you are supplied with pre-made HTML to incorporate into your page – the hardest bit is generally designing your own banner!

Exchanges generally allow you to specify what type of banner you will accept on your site, so it is possible to exclude, for example, commercial companies or adult sites.

A popular general exchange is Link Exchange at http://www.linkexchange.com If you are interested in an Acorn specific exchange, for example if you have RISC OS Public Domain software for downloading, you could try the Acorn Banner Exchange at http://the.hypermart.net/acorn/

Change notification

It is handy to have a means of notifying users that a page has been updated. One way of doing this is to use the *Netmind* URL



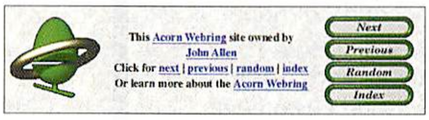
minder. There is example code for this at http://www.netmind.com/URL-minder/simpleform.html The code is copied into your page and provides a form for the user to enter their e-mail address and register.

There are a number of variations in how this service can be used, so it is worth having a good look around *Netmind's* help pages before using the service. I use the URL minder on my *Attacher* pre-release page with two of the extra features – anyone that registers gets a page from me thanking them for their registration rather than a default page from *Netmind* and I've also put an identifier line at the top of the page which allows me to collect statistics about users.

This really is quite a neat service. *Netmind* presumably intend to make money by including advertisements in their e-mails notifying change, but so far they have been few and far between.

Web rings

Web rings are a way of linking together sites which have a common theme. They exist for all sorts of topics and many are



listed at http://www.webring.com but you may well come upon other examples as you browse the Web.

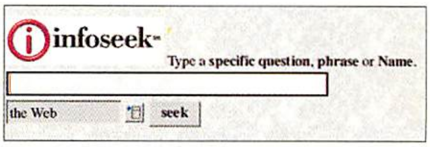
A site that is part of a Web ring gives links to go to the next site in the ring, lets you go back to the previous one or visit a site in the ring at random. There is usually a link for joining – if not, follow the link to the ring's home page. After registering you will be sent HTML to put into your page.

Some ring maintainers are quite strict about who can join – but that's good as it ensures that users come to value the links. There is a Web ring for Acorn computer enthusiasts with links to software you can download – including mine – and you can find that homepage at http://www.acorn-ring.home.ml.org/

If you have a site of specialist interest and there does not appear to be an existing Web ring for that subject, it is possible to create one via http://www.webring.com/ There are full instructions and you can be as strict as you like over who can join. However, to get a ring going does require some effort to find other people with similar sites who are prepared to be founder members.

Search engines

Normally you go to a special site for a search engine, such as *Yahoo* or *Alta Vista*, but it is possible to incorporate most of the popular engines on your own site. You should note that this does not enable them



to search your site – it just provides an interface to their normal database.

Generally there will be a link from a search engine's homepage to a page giving details of how they can be incorporated in your own pages. To add *Infoseek*, for example, go to their homepage at http://www.infoseek.com/ and click on the link "put Infoseek on your site" which gives a page of options of how it could look. Click on one and the HTML for the link will be displayed, save the page and incorporate it into your own page.

Conclusion

This article has just scratched the surface of the things you can add to your website. Many Internet Service Providers have useful clipart and background textures which are guaranteed to stay in the same place so that you can refer to them without having to store the image on your own site. It is worth looking at your provider's homepage for this.

There are many other facilities being offered on the Web – if you see an interesting facility in use there is usually some sort of link back to its homepage and instructions there on how it use it on your site.

To make it easy to use these add-ons I have created a demonstration page on my own website with examples of everything described plus a few extras. It also has links to relevant registration pages making it easy for you to use them on your own pages. My page is at http://www.bramber.demon.co.uk/auser/. AU

GAME SHOW

Steve Mumford reveals three new games from the stables of R-Comp Interactive

Welcome to another edition of the Game Show – this month, I'll be looking at several budget games from the Fourth Dimension and Intertek, but the major news is from R-Comp Interactive who have announced three more titles to be released in the immediate future.

They'll also be distributing Artex Software's graphical adventure game *Ankh*, which is almost ready for distribution as we speak. With the current rush of games continuing unabated, and the recent unveiling of Phoebe, the Acorn games market looks distinctly buoyant at the moment. Without further ado then, let's continue and take a look at some of the games just about to enter the scene.

More new games from RCI

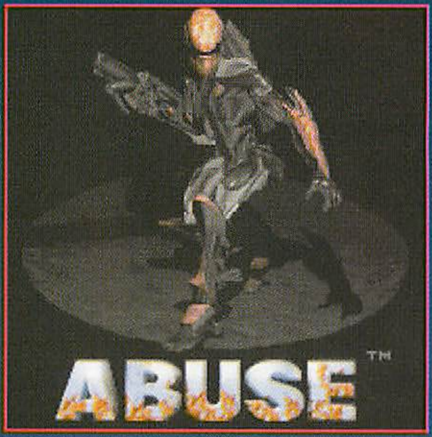
R-Comp Interactive have a surprise for all those people who might have been thinking that *AcornDoom* was the last new game they were going to see for a while. Just before the Wakefield Spring Show, RCI announced the imminent arrival of three new titles, all of which look set to cause a stir in the games market.

The first one that I mention has to be *AcornQuake* – although people around the world have been playing 'unofficial' versions



of *Quake* for some time, this is the first supported appearance and uses the *Quake* player co-developed between TBA and R-Comp Interactive. Following on in the manner of the *AcornDoom* release, the *Quake* player will be bundled with a limited-edition boxed set, containing the extra add-on packs *Q-Zone* and *Malice*, as well as the original CD.

The ability for network play should be incorporated as standard, which will please those who prefer the mechanics of the multiplayer game. However, if you don't happen to have a network of Acorns set up in your study, don't despair. The *Malice* pack has



been created as a standalone adventure, and is thought to provide a much stronger single-player experience.

As was the case with *Doom*, level editors have been available on the PC for an age, and *Quake* utilities are already appearing for the Acorn, so I'm hopeful that we'll see our own home-grown levels and patches in the near future. Needless to say, *AcornQuake* is aimed squarely at the StrongARM market.

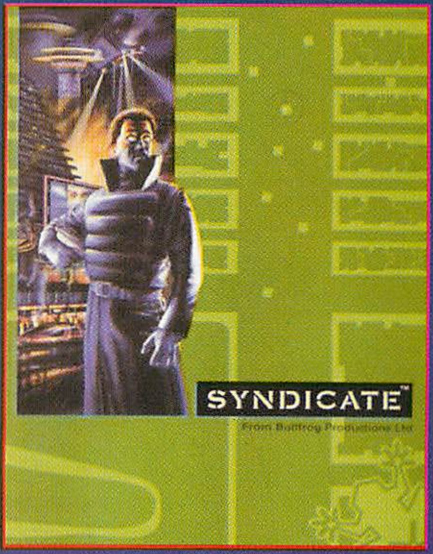
The next product to be revealed is perhaps a little more unexpected – Bullfrog's *Syndicate* series has been a big hit on the other platforms, creating a powerful cocktail of strategy and action as you are put in charge of an underground team of cybernetically enhanced 'agents' who, under your control, battle to expand your influence and the Syndicate's power. The game domain itself is presented in an isometric view and, using a point-and-click interface, you can guide your operatives around the map to tackle various missions – suppressing rebel factions, converting people to your cause and retiring those who prove to be obstinate.

We'll be receiving a conversion of *Syndicate Plus*, comprising the standard mission selection as well as the harder *American Revolt* pack, although various modifications and improvements have been made since the original. Graphics and music have both been enhanced and RCI are once again turning towards MIDI technology to provide the solutions. *Syndicate Plus* is a game I'm definitely looking forward to playing in full; I've been able to investigate a pre-release demonstration version of the game, and you can read the results later in this month's column.

Finally, R-Comp Interactive will be releasing the full commercial version of *Abuse*, a game you might have seen featured a few months ago in *Acorn User*'s public domain pages. A sideways-scrolling *Alien*-inspired shoot 'em-up, this package offers action in great meaty slabs. The full version has a whole load of new levels, but also features such improvements as high-resolution gameplay and dynamic light sourcing, as well as a multitasking level editor.

I'm overjoyed to see that R-Comp Interactive are pushing to release more PC classics on the Acorn; all three of their new releases are strong titles that deserve to do well. If all goes according to plan, the final versions of these games should be available by the time you read these words – keep watching these pages for full reviews.

One final word – R-Comp Interactive are on



the lookout for talented programmers at the moment, so if you fit the bill and want to help a few more of their projects see the light of day, it might be worth your while giving them a call.

Contact details
R-Comp Interactive
Tel: 01925-755043
WWW: http://www.rcomp.co.uk

Preview

Syndicate Plus

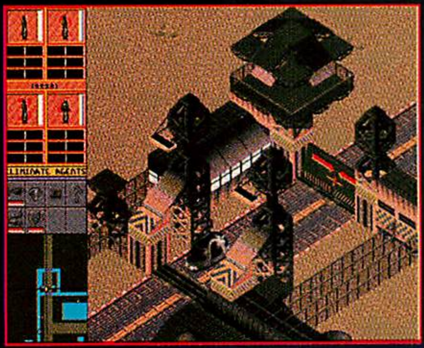


Steve Mumford previews Bullfrog's classic, converted for the Acorn by R-Comp Interactive

Syndicate is a game that I've enjoyed in a number of different forms – most recently, the sequel *Syndicate Wars* made an appearance on the PlayStation, proving that the game's overall design is still as popular as it ever was.

R-Comp Interactive are due to release a conversion of *Syndicate Plus*, a compilation that contains the original game as well as the extra missions pack named *American Revolt*. Prior to the release of the full game, RCI have produced a single-level demonstration that gives the player a taste of the game engine – I've been taking a look around *Syndicate's* mean streets in a preview of what's to come.

To describe the game briefly, the action takes place in a dark, lawless future where the population is controlled subliminally by the use of mood-altering silicon chips – these are embedded in every citizen's neck and control hormonal levels and behaviour. If an organisation can take control of the manufacture and use of these implants, they can control the people, and that's the point where the game starts.

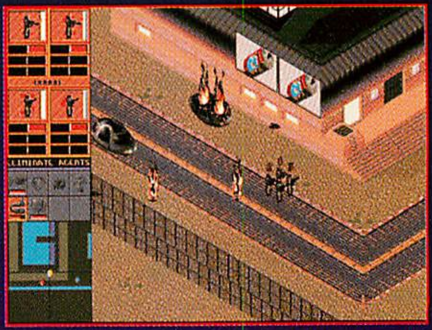


You play the part of a syndicate overseer whose job is to manipulate and control the local populace as well as extending your own sphere of influence. In classic style, this is done most often through the use of force and terrorism, although more subtle approaches can be employed where required.

Your pawns in this game of corruption are cybernetic agents, luckless humans who have been altered and enhanced using the latest robotic techniques and now serve your bidding without question. Controlling their actions from a tactical airship floating over the target city, you can direct their movements and choose how to tackle each mission as it is revealed to you.

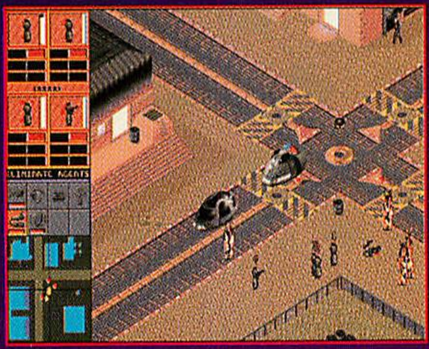
However, the agents still retain some of their original intelligence and can act autonomously should you allow them the freedom to do so. In the case of this demo level, the mission is quite simple; you have to get your agents inside the city before hunting down and 'retiring' any enemy agents that lie within, while avoiding any unnecessary entanglements with the police. Automatic barriers prevent pedestrians from entering or leaving the city; however, the Syndicate has thoughtfully provided you with an unmarked hovercar which can be used to infiltrate their defences.

Each city is drawn as an isometric map which takes up the bulk of the screen; the remainder is occupied by a radar-style scanner showing the locations of police, civilians and enemy agents, and a series of status indicators showing the health of your four agents as well as what they're up to. For the most part, this will involve running from one place to another, but as soon as your forces engage the enemy, the four icons allow you to see at a glance what sort of punishment they're taking. In 'panic mode', in which your agents are dosed to the maximum with psychotropic enhancers, the status indicators are an invaluable way of keeping tabs on the proceedings, which routinely become quite messy.



Two major weapons have been revealed in this demonstration – the mini-gun and flame thrower – along with several other devices, and even within the limited confines of the level you get plenty of chance to try them out. The graphics, for their day, were impressive and the explosions, shrapnel and raging fires were expertly captured. Even though the graphics are limited in colour, the detail in the animation brings them vividly to life – the effects of the flame-thrower can be particularly gruesome.

One part of the game that this preview level doesn't show is the atmosphere that's built up through the in-game menus and briefing screens; Bullfrog spent a lot of time designing an interface that enhanced the title's dark, menacing feel, and placed the player firmly in the hot seat. Selection screens exist to allow for new technological research to be planned and carried out, and the inventory screen is where those new devices can be distributed between the agents. Access to the Cryovat lets you train and pick particular agents for certain mission types – choose carefully and your chances of success will increase. There's a lot more to *Syndicate* than the arcade action alone.



Although the demonstration level represents only a fraction of the gameplay, from the parts that I've seen it looks like R-Comp Interactive have made a good job of the conversion. The game runs smoothly, and the graphics, although looking a little dated, are crisp and clear. The only disappointing area is *Syndicate*'s sound, which isn't particularly inspiring. That said, I'm looking forward to playing the full version of the game – I just happen to have a PC version of *Syndicate Plus* sitting in front of me as I write, and I'll be particularly interested in comparing it to the Acorn version.

GAME SHOW

Oldies but goodies?

Do they stand up to time? **Steve Mumford** checks it out

Intertek have recently announced the release of a compilation pack of three of their previous games, *Blood Sport*, *Aggressor* and *Sorcery*, for the competitive price of £6 including postage and packing, although it's also possible to buy the games individually for £3 each. The titles have undergone a few cosmetic changes here and there, all can be installed to a hard disc and run happily under the StrongARM.

Aggressor

This sideways scrolling shoot 'em-up first cropped up a good number of years ago and plunged the player into yet another deep-space battle between hardened marines and psychotic aliens intent to escape from their prison ship. Graphical cut scenes introduce the action at the start of the game and between levels, and once the fight is underway, it's up to the two main characters, Heckler and Kosh, to save the day.



As well as the customary mass destruction of alien life, the levels have two other objectives to tackle – vital machinery has to be repaired and any human victims trapped by the aliens must be released. The graphics are simple but colourful and although the method of play is a lot less taxing than a game such as *Abuse*, if you're after a straightforward shoot 'em-up, *Aggressor* serves its purpose.

The control method is a little unusual in that these tough marine lads don't seem to be able to run and fire a gun at the same time – I can only view this as a tactical disadvantage. Still, you can sweep the direction of fire all around the screen and, coupled with the range of munitions that crop up throughout the game, it's possible to make reasonable headway through the morass of xenoforms occupying the vessel. As is common with many of Intertek's games, there's a simultaneous two player mode to keep you occupied, where both players act as a team to clear the alien infestation.

Blood Sport

For some reason, certain games appear to date much faster than other ones; the martial arts category is one of the fastest to degrade. *Blood Sport* is a two-player side-view beat 'em-up, and provides the player with a variety of punches and kicks as well as a special move for each character. As is the norm, you have to battle a number of contestants, each with differing skills, in order to reach enlightenment – or at least a hospital.

The two-player mode will go a little way in recovering some aspects of the game's playability, but I'm afraid once you've played *Tekken 2* or one of the later versions of *Street Fighter*, it's hard to look at their predecessors and think of anything but *Yie Ar Kung Fu.* The controls aren't responsive enough to support any degree of skill, and once players are reduced to what amounts to random button-pushing, they quickly lose interest. *Blood Sport* is the weakest of the three titles on offer here, but it's quite entertaining to see just how far we've come.



Sorcery

Probably my favourite game of the three, this is a reworking of the *Bomberman* theme, pitting ancient wizards and witches against each other in an ongoing struggle for power. In the game's 'story' mode, one or two players can enter the labyrinth to defeat the guardians within and run off with the treasure; alternatively, players can go head-to-head and choose one of many unusual characters with which to do battle. All manner of power-ups are available, including the ability to lob bombs over walls and kick them around, as well as the standard speed and range tokens.

Sorcery showed the nicest title screen and menu setups of the three, and was only really let down by a 'feature' of the control system that meant that if you were impeded by a wall instead of stopping dead, your character would suddenly veer off to one side – not ideal when a mummified guard is heading your way or you just happen to be near a vat of red-hot lava. Sadly, this feature still exists and can dent an otherwise enjoyable playing experience.





The verdict

In summary, these games are all quite old and have their own unique quirks; however, all have multiplayer modes that make them a little more playable. The games share some common faults though – the introductory screens and messages are often cluttered and hard to read and the games themselves can leave the machine in a bit of an indeterminate state once you've finished playing. However, the price at which the titles are being offered means that these faults aren't particularly serious. If you'd like to know more, Intertek can be contacted at *7A Lovat Close, Neasden, London, NW2 7RU.*

GAME SHOW
Value for Money?

Steve Mumford looks into the 4th Dimension

This month I'm looking at two more games from the Fourth Dimension's value for money range – *Silver Ball*, a pinball simulator, and *Groundhog*, an arcade puzzle game. Both cost £9.99 each, and are supplied in resealable plastic bags with a sheet of instructions.

Playing the silver ball

I'm afraid that pinball is one of those pastimes that's hard to recreate on a computer; anyone who tries to implement such a game has to have an incredible eye for detail.

I'm not saying that it's impossible to produce a good computer pinball title, but I don't believe that the simple act of bouncing a ball round the screen constitutes a game of pinball, and anyone who's planning to program a simulator should take a pot of loose change down to their local amusement arcade before even approaching a keyboard.

Silver Ball has 10 different tables with five graphical styles, using shaded fractals or digitised photos for the backdrops. A multiplayer option is available, and along with the standard collection of bumpers, drop targets and pins, you can enter a three-way multiball mode if you're lucky. Although the instructions make reference to 'state-of-the-art ray-traced objects', the low-resolution graphics that confront the player once they've loaded the game are by no means inspiring.



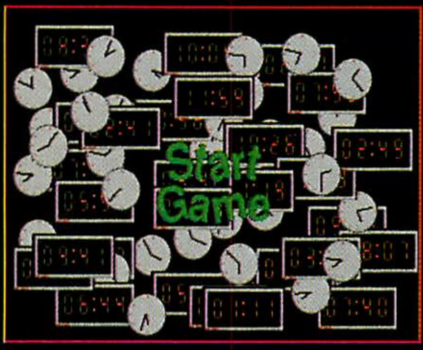


My main concern is that in terms of gameplay, *Silver Ball* reminds me of the pinball construction kits seen, for instance, on the good old BBC. The games in the arcades have advanced several generations since then, with tables having well-designed themes and modes of play rather than the somewhat arbitrary object layouts that existed in the past. If we're on the lookout for simple yet successful simulators, *Kirby's Pinball Land* is a nice example and one that has lessons to teach. Written for the Game Boy and using the small, monochrome screen to its advantage, *Kirby* manages to pack in plenty of special widgets and bonus games that are great fun to play while presenting a simple, yet absorbing, table design.

It doesn't try to be ultra-realistic, yet the way the ball bounces round the table and lands on the flippers feels completely authentic. I'd love to see a decent up-to-date pinball simulator for the Acorn; it's a passion of mine, I'll admit it, and the sooner someone produces one, the happier I'll be. Anybody fancy the challenge?

Groundhog Day

Groundhog is probably the strangest game I've seen this year, and it follows the fortunes of a furry rodent who just happens to be stuck in a time loop. A puzzle game by nature, it requires you to guide the groundhog through a series of mazes, hindered by varying numbers of automatic doors operated by remote touch pads.

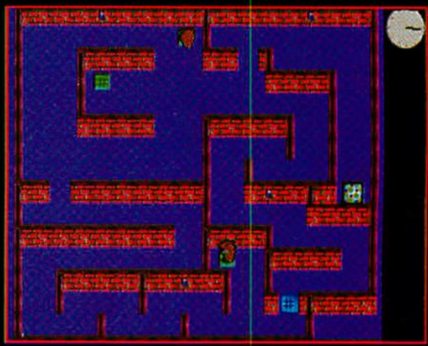


This is where you discover the first in a series of catches; as soon as the rodent steps off a touch pad, the corresponding door slams shut, so at first sight your task appears impossible. However, help is at hand; when your personal time anomaly starts over again, your earlier self appears once more to retrace the steps you've taken. By synchronising your movements, it's possible to progress deeper into the heart of the maze.

Of course, nothing's ever straightforward, and if the groundhog should bump into an earlier copy of itself, an irreconcilable temporal paradox is created that results in the destruction of the current timeline and all those who lie within it. Typically, there are also other denizens inside the corridors; come too close to one of the service droids and you'll catch a virus and lose your strength.

The only way to solve the problem is to catch up with the robot in the next time loop and destroy it before it manages to infect you. Having a handgun complicates the issue even further; while you're spraying bullets down corridors, you have to be wary that you don't accidentally shoot earlier copies of yourself, or make passageways impenetrable with streams of gunfire.

To sum the game up, it's all very confusing, but strangely and pleasantly addictive – as well as arcade reflexes, it's vital to be able to think in two directions as once, remembering your past movements as well as planning ahead to make sure you don't inadvertently block any passages.



Every time round the loop, another rodent appears on screen, following the precise movements that you've already traced out; the longer you take to complete a level, the more congested the maze becomes. Add a simultaneous two-player mode to the game and, well, I'll leave it to your imagination.

The idea behind the game is wonderfully original and works well in practice, but I would have liked to have seen it taken further. *Groundhog* is also let down by its presentation; the price of the game is too high for a standard low-resolution mode to be acceptable. Contact the Fourth Dimension on 01624 836744.

Micro Laser Designs

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Tel : (01225) 833266
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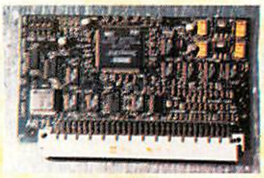
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SECOND HAND ACORN COMPUTERS

No more Macromedia

Acorn have decided to stop work on a RISC OS Macromedia Player. It was promised almost two years ago and is a blow to SEMERC who have produced their *Wellington Square*, *Fuzzbuzz* and *All About ...* series using Macromedia with the intention of producing PC, Mac and Acorn versions of the software. They will still be supporting the Acorn, but this is definitely an own goal from Cambridge.

Orders had already been taken from Acorn schools and they have been told of Acorn's decision. Commenting on the announcement, SEMERC's Paul Nuttall told *Acorn User*: "We are disappointed that Xemplar/Acorn seem unable to commit themselves to fully developing a Macromedia Player. The implication is that Acorn users will find themselves increasingly isolated".

The official line from Acorn is that the project is *on hold*: "To continue as a partner with Macromedia requires a considerable amount of resources and money and it was thought not a viable thing to do on our own. We still have an option to continue but the window of opportunity is becoming narrower," commented Martin Neville-Smith, Manager of Internet Technologies. The development was started by Online Media when Macromedia was thought to be a vital technology to develop, since the demise of OM there is no real impetus for Acorn to continue without a partner.

And what about Xemplar who have been encouraging education software houses to go down this route so that they have a three platform solution on a hardware and software level? Nick Evans is sympathetic but Acorn are one of Xemplar's parent companies and as such he asserts that they have limited influence: "Acorn are one of our suppliers.

We tell developers of opportunities in good faith, if Acorn change their mind there is little we can do". The disappointment is compounded when you realise the number of PC and Mac publishers who use Macromedia Director and the potential for an increase in number and variety of software titles available to the RISC OS market if the player was completed.



Beware Greeks...

Following their excellent Vikings, Romans and Egyptians, Anglia are about to release *Ancient Greeks*. Aimed at 7 to 11-year olds, this introduces children to the history and importance of this ancient civilisation in today's society. But rather than a dry look at the classics, this starts with the Oracle imploring you to help to restore her ruined city to its former glory.

All you have to do is take on certain Herculean tasks. A selection of reference tools are at your disposal: A timeline, a specially-written version of Homer's Illiad, a dictionary of Greek, Roman and English alphabets, as well as a selection of Greek stories and myths.

You can access these as you explore the temple, stadium, amphitheatres and agora among others. The CD-ROM costs £40 from Anglia Multimedia (01268 755 811) which includes a set of photocopiable worksheets and a weblink to recommended sites on ancient Greece.

The longest day

Normandy: 1944 – *http://normandy.eb.com* – is a new, free site from *Encyclopaedia Britannica*. The site unfolds by following the same June timeline as in 1944. It builds on video clips of British newsreels and documentaries, clips from BBC Radio broadcasts including one from Richard Dimbleby in a RAF spitfire formation on a search and destroy mission. There is also information on weapons and tactics with details and illustrations of the armoured vehicles, aircraft, anti-tank weapons and amphibious vessels.



John Keegan, Defence Editor for the Daily Telegraph and the BBC's Reith Lecturer for 1998 has written the principal article detailing how one of the greatest invasions in international military history was planned and implemented. There are links to a variety of information sources, from the personal accounts of British soldiers landing on the beaches to the reminiscences of French civilians. There are also biographies of key British army, navy and airforce personnel – there is even a piece on British meteorologist, James Martin Stagg. He was the chief weather forecaster who gave the crucial advice on conditions for the invasion.

The maps are varied, some with overlays comparing the planned assault with the initial result and final outcome. Others show the relief of the dunes as well as the fortifications, defences, roads and the drive to Paris. Only online until the end of August which coincides with the release of Steven Spielberg's *Saving Private Ryan*, the site offers a virtual march through the World War II invasion.

Upping the ante

Version 1.03 of *VirtuaCD*, PEP Associates' CD-ROM emulator, is now available as a free upgrade from their website (www.pep-assoc.co.uk). *VirtuaCD* allows you to capture file-based images of CD-ROMs and then access them as if the CD-ROMs were present. The CD-ROM transfer application – *CDtoHD* – is faster and now provides visual feedback of the process and the installation has been improved to make it easier for first-time users.

Contacting me

You can contact the Education page by writing to me, Pam Turnbull at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or e-mail: aueduc@idg.co.uk

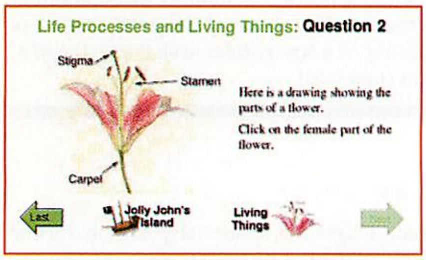
Website

If you go down to the woods today...

Anglia want to show you the way, with their new educational online service for UK schools. **Pam Turnbull** gives it a whirl

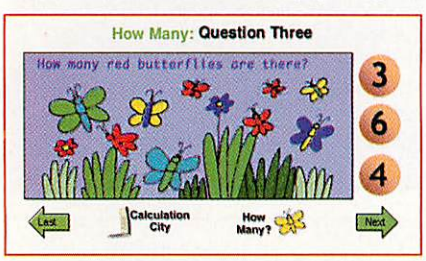
Now up-and-running is Anglia's new Web-based subscription service for schools. It promises access to the information rich world of the Internet with none of the pitfalls.

Material is available at Primary and Secondary level. The Primary side takes the metaphor of a theme park with areas and characters relating to subjects in the curriculum. For example, in *Anglia Airways* Captain Country and his crew take you to places throughout the UK and the rest of the world while covering aspects of the Geography curriculum. It contains varied subject matter with nice maps, illustrations and information easy to assimilate and navigate. The content and words are just right for the age group and I especially liked the words in blue which took you to an illustrated glossary section. Each topic, whether Ladakh in India or Going Shopping, is tightly linked to the National Curriculum and Scottish 5-14 Guidelines.



All 10 subjects of the National Curriculum are covered in *Art Studio, Calculation City, Haunted House, Jolly John's Island* (Science), *Music Studio* (inactive at the time of going to press), *Nature Park, Story Cottage, Technopolis* and the *Time Machine*.

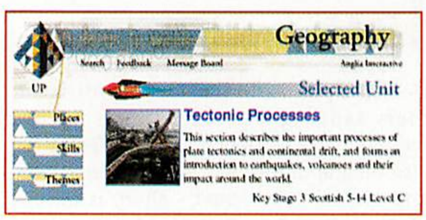
The online maths activities are interesting and only permit correct answers. Corner Shop covers the basics of number, colour – great fun – measurement and shape, while Arithmetic Alley gives good SATs support. These are the same each time you play and it will be interesting to see how often these are updated or added to. Each area has a message board attached for teachers to discuss or exchange ideas.



As you'd expect with the impending Literacy Hour, language is well covered whether dealing with nouns or following recipes, instructions or indulging in a little comprehension or reading new stories from a range of cultures. I found the Science and History sections useful with a database of 500 flowers to download and masses of information on Tudor life.

Move onto the Secondary area and this is divided under traditional subject headings – Science, Design Technology, Mathematics, English, History, Geography, Language, Art, Music, RE, PE and Information Technology. Some areas are more developed than others with *coming soon* announcements to whet your appetite or useful links to other websites.

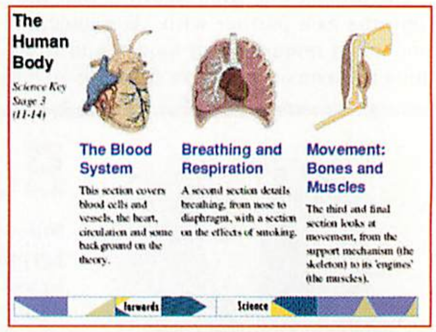
Choose a subject and one activity will be highlighted or you can look for something more by browsing or using the search facility. It's less developed than the Primary side but the content is excellent and very specific to curriculum requirements nonetheless. It is full of good ideas for the classroom, especially the more developed English, Maths and Science areas.



Supplementing the curriculum content are monthly activities, interactive projects and events linked to topical events – from communicating with scientists while investigating a stretch of British coastline to following a group of virtual pilgrims as they explore the route of a medieval pilgrim trail to an online interactive activity with a school in Istanbul. In addition, Anglia plan to combine real-time interactive chat with online gaming and increase the number of downloadable datafiles (mostly Key datafiles at present) and *My World*-type online activities.

Schools also get the curriculum website on CD-ROM once a term, which is available on subscription This means that schools with networks can share resources quickly or create their own subject-specific Intranet. Alternatively, the CD-ROM can be used on a standalone machine and Anglia allow teachers to use this at home (most licences being school-based) so that they can prepare work using the material without incurring an even larger phone bill.

One of the problems that schools will increasingly encounter is the problem of copyright clearance on material pupils might download and use from the Internet. Anglia have cleared the copyright on all material to be found on the site for education use by pupils and teachers in subscribing schools.



It's still in its early stages, but there is already a good deal of information for all Key Stages with some excellent study, display and revision tools. Similar sites have skimped on the Key Stage 1 and 2 areas but this isn't the case here.

Whether you would use enough of the information to justify the cost depends on your individual school, luckily the trial area will give you a taster before you sign up. If they continue in the same vein, Anglia Interactive could have one of the best websites around for UK schools.

Product details

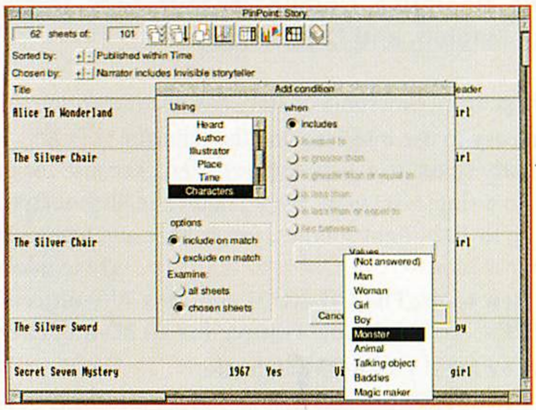
Product:	Anglia Interactive
Price:	Annual subscription - Primary £79 (schools over 150 pupils £125), Middle £249 (these schools receive both Primary and Secondary service), Secondary £399 (schools over 500 students £499). This includes a CD-ROM which comes with a Web browser, Argosphere and Anglia Interactive sites.
Publisher:	Anglia Multimedia
Tel:	01268-755811
WWW:	http://www.anglia.co.uk/education/try/ – for a trial

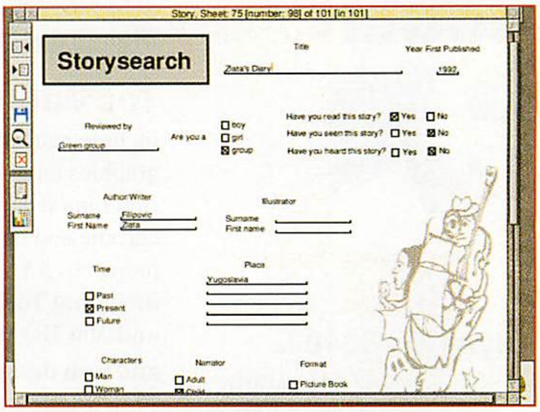
Once upon a time

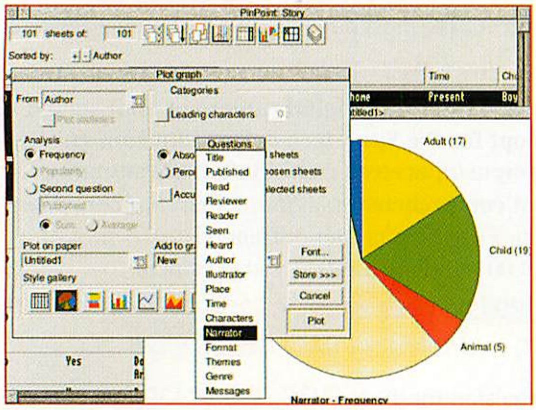
Literacy hours are not about just deciphering the words but also understanding how books are put together. Pam Turnbull reports on one package looking to help

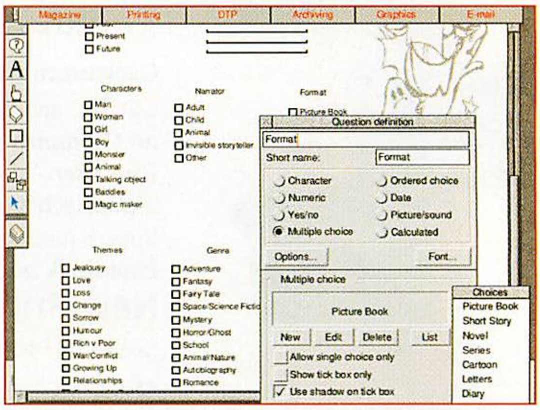
One of the best programs I've found for handling data is *PinPoint* – a database system available in two forms for Key Stage 1-2 and 3-4.

It helps children develop not only their data handling and interpretation of information in a straightforward way, but lets them do so by creating their own questionnaires using dialogue boxes to specify the type of answer they expect, copy the information into the computer and then analyse the answers in a table with simple tools to sort, select and do statistical analyses, producing a range of summaries in graphs, chart or table form. Logotron have not left it there though. They have developed a range of data files which you can use straight or edit.









Latest to join the range is *Storysearch* – a questionnaire and database that asks individuals, groups and whole classes to analyse books, poems, films, plays and so on that they have heard, seen or read. The supplied questionnaire asks for basic information such as when a book was published, its author, illustrator and reader (and their gender) as well as looking at the styles of narration used, the genre, themes, characters, settings and so on.

Children can add their own notes or mini-reviews and you can customise, fine tune or completely alter the questionnaire to fit your needs. One hundred items are in the initial list and cover the most popular works from authors such as Anne Fine, Allan Ahlberg, Anthony Browne and C S Lewis. You can use the information as it stands and there are five activity sheets which will ask for a variety of analyses or give you ideas for your own.

Children can then look at gender preferences, the most common themes in children's books, the use of narrative voices, the influence of film or an analysis of one author's work.

This not only gets children to use data handling as a means to an end in a context other than a maths lesson, but in this instance encourages them to think about the structure of fiction, understand the language used in critiques, look at the messages the author is trying to relate and compare different styles of text, use of imagery and popular culture.

Completing the questionnaire also raises practical issues such as which is the publication date and the reprint date, ordering of books in libraries, whether books can only be set in one time period and so on. This is a timely, innovative, original and cost-effective use of existing resources.

Other Logotron data files

Logotron have a range of data files all with helpful photocopiable masters and ideas for data handling in a variety of subject areas from history to language:

HISTORY
Ancient Civilisations (Key Stage 2-4) £15
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The British Monarchs (Key Stage 2-4) £15
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Victorians (Key Stage 2-4) £15
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Les Fiches de Francais (Key Stage 2-4) French £15

OTHERS
Festivals (Key Stage 2-4) RE £15
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Product details

Product:	Storysearch
Ages:	7-14
Price:	£15
Publisher:	Logotron
Tel:	01223-425558
Web:	http://www.logo.com
Requirements:	Junior PinPoint (Key Stage 1-2), £31 or PinPoint 2 (Key Stage 3-4), £99

One, two and three

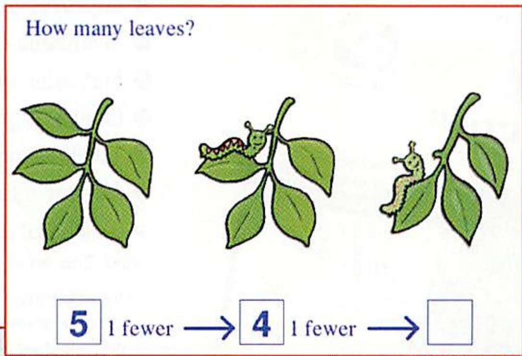
Pam Turnbull looks at two additions to a maths scheme which has had something of a facelift

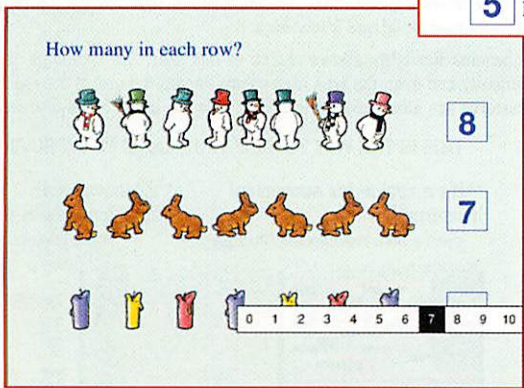
Primary Maths was initially developed two years ago by Iota and is based on the Cambridge Primary Maths Scheme. This scheme takes an informal and very colourful approach with lots of practical activities based on real-life situations that involve a good deal of investigation and problem-solving.

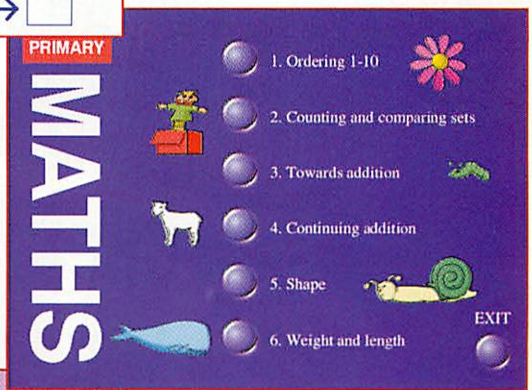
The more you plan, the more you'll get from this and it works best in a class where the ability level is at extremes. The course is very flexible with a great deal of additional material to add to the core product such as practice sheets, puzzle packs, board games, extension activities, review sheets and mental maths books among others. This software is just one more element.

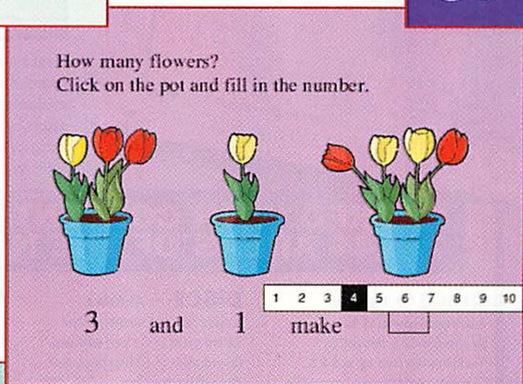
Primary Maths 1 covers sorting and matching, matching sets, and numbers between 0 and 10, with ordering between 1 and 5. The second CD-ROM takes over where the first finishes, ordering 1-10, counting and comparing sets and works towards the concepts of addition, shape, weight and length.

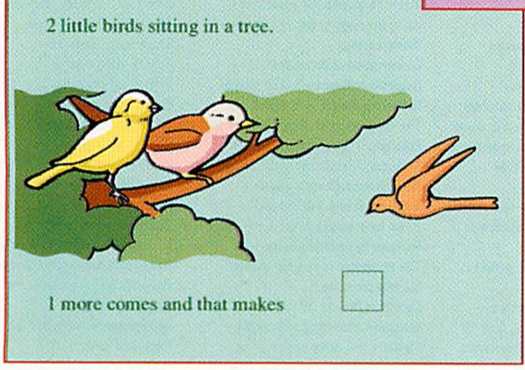
The voices are varied and friendly and the graphics are bright, colourful everyday objects. The idea is that by working through a section you discover and practice a concept. Unfortunately there is no feedback on why you got something wrong, hints or teaching input and no learning strategy apart from trial and error. *Primary Maths 2* does give children a nice reward screen and seems more lively and fun than the first set of programs, as well as dealing with more varied concepts, however it's really just more of the same.













Sherston have added a register element to the original release and this keeps a record of progress and allows children to restart where they left off. It shows which sections they've completed and an overall percentage for performance. However, you must set the teacher option *Pupil sign in* otherwise just clicking on the iconbar will launch the program – in full-screen or in a window – but it keeps no records.

This is colourful with great graphics, but it is very repetitive with long sections of screens on the same concept. The major problem is that children can succeed by random clicking which means that a child could work his way through both programs and not actually learn anything.

It is another resource to add to the scheme but it hardly makes the most of the computer or the scheme. Indeed it smacks of a need to incorporate IT without thinking whether the work could actually be done better in a workbook. As a set of reinforcement exercises these are fine if you're already using the scheme and looking for a computer element and are prepared to work them in yourself, but the CDs don't really stand on their own and I can't help but think that this is a missed opportunity.

Product details

Product:	Primary Maths 1 and 2 CD-ROMs (Available in English and Welsh)
Ages:	5-7
Price:	£29.95 each
Publisher:	Sherston
Tel:	01666 840433
Web:	http://www.sherston.com

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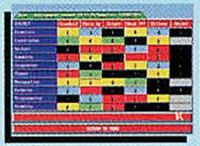
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Div. of 2-digit No's by single digits
Equivalence of fractions (and ratios)
Convert fractions to percentages
Subtraction facts up to 10
Addition facts up to 20
Mult. - single-digit powers of 10
Division of single-digit powers of 10
Percentage changes
Convert fractions to decimals
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The 2, 5 & 10 times tables
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Mental addition of single-digit No's
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Ment. div. - multiples of powers of 10
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Multiplication and division problems
Memory and brackets on calculator
Standard form (integral powers of 10)
Add & subtract problems inc. money
Estimates based on familiar units
Using multiplication and division
Imperial units in daily use
Index notation
Four rules of fractions

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Co-ordinates in all four quadrants
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Simple inequalities
Locate regions by inequalities
Number patterns up to 10
Simple function machines
Explore the properties of numbers
Simple formulae expressed in words
Explore number patterns (mappings)
Linear and other inequalities
Odd and even numbers
Mult. and div. as inverse operations
Co-ordinates in all four quadrants
Simultaneous equations
Interpret graphs of form y=mx+c
The shape of graphs
Symbols in place of numbers
Whole Nos. divisible by 2, 5 or 10
Terms like square, multiple, factor
Terms like prime, cube, square root
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Manipulate algebraic equations
Repeating patterns in objects
Explain number patterns
Add to sequences
Patterns in equivalent fractions
The rules of sequences
Using indices
Simple number patterns
Simple equations expressed in words
Sequences/Interpreting instructions
Express simple functions in symbols
Solve simple inequalities
Use and rearrange functions

DiSC3 – Geometry
Angle as a measurement of turn
Compass directions
Points on graphs (first quadrant)
Points on graphs (all quadrants)
Using bearings to define directions
Vector notation
Conservation of measures
Reflective symmetry in 2-D shapes
Reflecting shapes in a mirror line
The congruence of simple shapes
Enlarging - integral scale factors
Enlarging - fractional scale factors
Turning through right angles
Sorting 2-D and 3-D shapes
Areas by counting squares
Volumes by counting cubes
The symmetry of various shapes
Classify formulae
Construct 2D and 3D shapes
Language associated with angle
Measure and draw angles
Using networks to solve problems
Types of quadrilateral
The locus of a moving object
Perimeters of simple shapes
Appropriate formulae to find areas
Areas of circles using a formulae
Pythagoras' theorem
Calculations on plain & solid shapes
Sine, cosine and tangent
Recognise 2-D and 3-D shapes
Recognise rotational symmetry
Intersecting and parallel lines
Volumes of simple solids
Properties of polygons
Mathematical similarity

DiSC4 – Statistics
Construct block graphs
Construct and interpret pictograms
Construct bar-line and line graphs
Construct frequency diagrams
Draw frequency polygons
Construct histograms
Record using objects
Record using events
Collect, group and order data
Different outcomes from repetition
Record grouped data
Relative frequency in probability
Outcomes of random events
Place events in order of likelihood
The median and mode
Subjective estimates of probabilities
Distinguish estimates of probabilities
Probabilities for exclusive events
Sort a set of objects
Appropriate words to identify chance
Mean and range
Probability of equally likely events
Probability of a combined event
Probability of two events happening
Criteria to classify objects
Uncertain/certain/impossible events
Understand the idea of evens
Fair and unfair events
P(E)+P(not E)=1 and P(not E)=1-P(E)
Calculate the mean
Interpret block graphs
Interpret pictographs
Interpret pie-charts
Two-way tables & network diagrams
Interpret cumulative frequency tables
Interpret histograms

Dave Acton and **Dave Lawrence** get well oiled over graphic ditties

star info

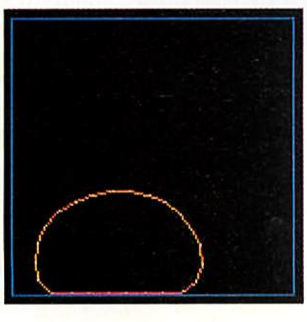
No spring chicken

Author: Alain Brobecker

This may well be the case, but **Alain Brobecker** has sent us a predictably unpredictable springy string, an elastic band in a box, a bouncy spaceship and a jelly icosahedron!

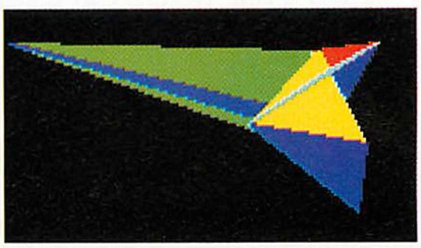
As you may have guessed, *SprngStrng* is Yet Another Variation of one of our all time *info classics – The 'StringThing'. This springy version replaces the individual components of the string with springs. One end of the string is attached to the mouse which allows you to boing and bounce the string around the screen. Small sudden movements produce the most convincing results as the springs themselves do not extend dramatically beyond their natural length.

Three parameters can be altered at the start of the program to play around with the various physical forces in action. **k** is the spring's stiffness, increasing this makes the springs firmer – harder to extend and compress. A smaller value makes them more springy.



a is the absorption – larger values will make the springs' motion less damped (i.e. more bouncy). Greater than one and they will rebound with more force than was put in! Reducing **a** makes the springs less bouncy – as if they were moving in treacle. Finally **g** controls the gravity, the end of the spring not attached to the mouse naturally falls towards the bottom of the screen, smaller **g** (note that it is negative here!) produces stronger gravity, larger **g** gives less gravity.

Alain's second springy program is *SprngSrfc*. Please note there is no mouse



control over this demo – it took us quite a few minutes to realise we weren't controlling the 'blob' at all! A rubber band is created by joining together a ring of springs; it is then placed in a box and bounced around. The acceleration is computed so that the surface of the resulting polygon stays constant (this can be seen more clearly by reducing the number of points to four or even three). Gravity 'rotates' around the depth axis (into the screen) and occasionally PI [radians] are added to the gravity 'angle'. The result is uncannily organic – you could easily imagine Agents M and S chasing this blob, well, maybe if it was in a dusty warehouse and there were more torch lights...

BoingShip puts you back into control with the keyboard. This time an 'asteroids' ship has been fashioned out of the finest springy material. Left and right cursor keys rotate it and up applies a small amount of thrust. The ship boings and bounces its way around the screen in a most satisfactory manner. Alain handles the rotation in an interesting way – rather than just spin the ship about, he adds an acceleration to each corner of ship which is (watch out – techie word coming up which we had to look up!) normal to the barycentre-corner axis. If you haven't got a dictionary to hand, it means centre of gravity.



Finally from Alain is *IkoMusFill*. This takes the idea of springs up a dimension. An Icosahedron is made up from, er, many, springs and it bounces around in 3D. The gravity 'rotates' around the x axis and, to make it even more fun, you can control it to a certain extent with the mouse – one node on the surface is connected to the pointer position.

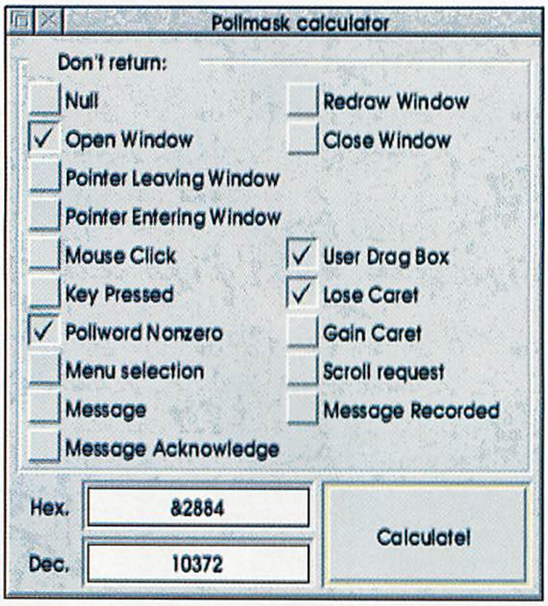
You want a mask on

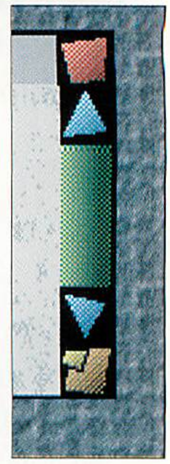
Author: Keith Gaughan

Do you often find yourself fumbling around in binary and hex when trying to calculate Wimp pollmasks? I know I do. If you do then you need quick acting *Pollster!* – new from **Keith Gaughan**. Just add a small sachet of *Pollster* to your desktop and you'll never be bothered by troublesome pollmasks again.

To use double-click *Pollster*, it runs in a window, but does not install an iconbar icon, so if you shut the window you'll need to re-run it. Select the items you wish to include in your pollmask and click on the large Calculate button, the value of the mask will be shown in decimal and hex in the two icons at the bottom of the window.

Pollster also works in reverse – type in a decimal (or hex) value and press return, the mask value will be decoded and the appropriate flags, er, flagged.





Also from Keith, a small bonus which fits into our occasional series of desktop themes. *MK* does not stand for Milton Keynes, rather *Melting Khubes* and according to Keith it is 'number one of the Marlamatic desktop look series'.

He goes on to explain that *Marla* is Irish for Plasticine® or more precisely, modelling clay. We can't wait for number two, complete with the PlayDoh hair-cutting salon task switcher icon.

We fade to grey

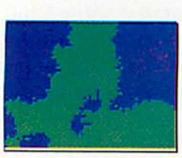
Author: Mark Adcock

It is interesting watching the way various video and text effects come and go in television commercials. At the moment the trend seems to be for many different fonts to be overlaid and chopped and changed continually. Before that focusing effects and smudging and smearing were all the rage. Where would the modern graphic designer be without Adobe's fine range of electronic jiggery and video pokery? Well, it's bandwagon time, and here's a demonstration of the sort of effect more commonly seen trying to persuade you to buy something with a lock away core.



FastFade reads pixels from the screen and averages points up, down, left and right to the same value. It reads and writes the screen memory directly rather than using a secondary buffer.

This means that it is not perfect – as the scan goes from down the screen some of the pixels examined will have already been averaged. In practice, you'd be hard pushed to spot this slight trick and it does mean the program runs quicker. The code actually works on 4x4 pixel blocks. It reads one byte per block, but then updates all 16 pixels.



Random circles and rings are plotted on the screen which are then faded using the effect. You can also hold down any mouse button and waggle the mouse around to draw in large blobs.

As it stands, the program is designed to run on a Risc PC with a fully definable palette, it is slowly changed over time. By changing the variable *RPC* to 0, Mode 13 is used instead. The result in this mode is not as pleasant, but is quite interesting in its own right.

SlowFade is identical to *FastFade* but it operates on screen blocks of 1x4 pixels instead. This is obviously slower, but because it is less chunky looks a lot better. We've also had a quick and dirty fiddle around in Mark's code to produce *SlowerFade*, this treats pixels individually and gives the smoothest display of all, but only runs at an acceptable speed on a StrongARM.

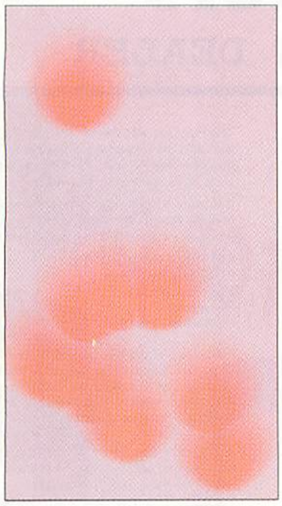
On a slightly different tack, Mark has also sent us *InkBlot*. He says that one of his previous schools was so old-fashioned that they gave out bits of blotting paper because they were supposed to use fountain pens.

'For some reason, it was always green and we usually ended up seeing who could make it go blue in the shortest amount of time by drawing all over. This program attempts to reproduce the way the ink used to soak through the paper, using up a whole ink cartridge in about 10 seconds. Press Select to draw, Menu to erase (draws in green instead of blue) and Adjust to steal somebody else's blotting paper before they've had the chance to draw all over it.

This program works by sending dots out in all directions which stop when they reach a green pixel (or blue if you're erasing). The program runs in three modes, mode 13, 15 or 28; alter *m* to change the mode used.

Oiled painting

Author: Nigel Stoner

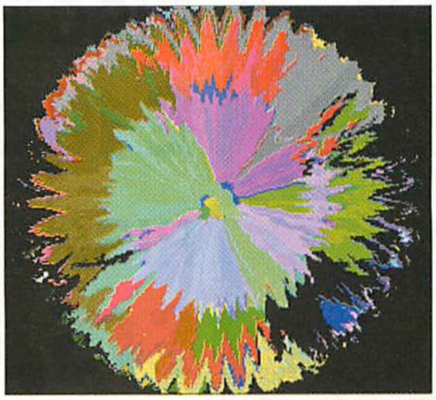


I think I remember what **Nigel Stoner** is talking about – some sort of motorised turntable, circles of paper, squeezy tubes of paint and a vigorous scrubbing afterwards. Quite why you wanted a circular splot of paint I don't know.

Nigel brings your misspent youth back to you (well, the circular paint splotted bit of it) with *Splata*. He describes it as *'like those twirly paint things'*, so I guess my memory is correct.

Draw some paint onto the screen with the left mouse button, then press the right button to spin it. The nearer to the centre of the screen you paint, the further it is splattered. If all this is just too much for you, then try *SplatAuto*, this performs the same spinning and splattering effect, but the painting bit is handled for you – a bit of trig is used to draw some spirally, circley kind of shapes in random colours to simulate some madman with a paint brush.

Both of these programs feature a gadget the original spinning turntable never had – press Escape and all the paint on the screen is magically sucked back into the centre. Sure beats half an hour of vigorous scrubbing... or, er, maybe not.





Nigel's second contribution this month continues our quest for the perfect simulation of a lava lamp. This one allows you to pick the colour of the lava blobs and the liquid – try a dark red background with a light yellow/orange lava for a nice effect. A number of blobs will then rise up as if heated before tumbling back down the sides.

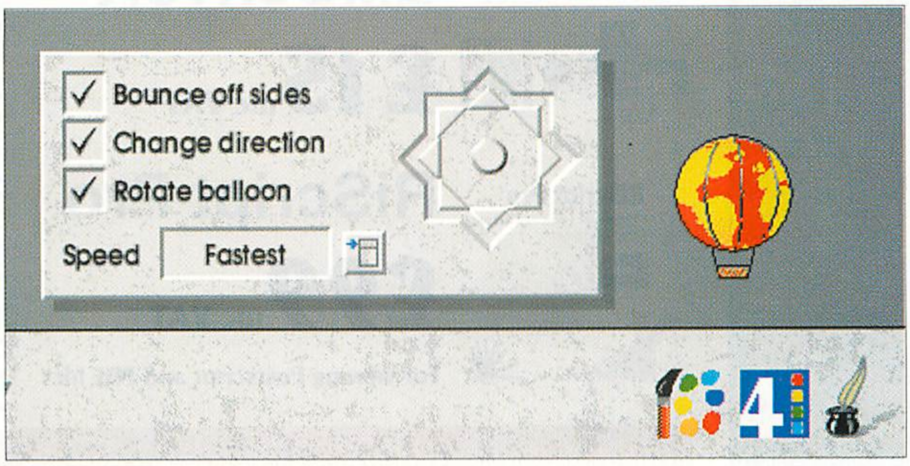
Graphically, this is one of the best lamps we've had, but we'd still like to see a simulation which aren't separate blobs as such – more a mass of 'stuff' that can break up and coalesce.

What's on the other side?

Author: Philip Mellor

Inspired by Owain Cole's Channel 5 logo simulation in the March issue, our friend **Philip Mellor** changes channels and recreates the BBC balloon on your desktop.

Once installed, the familiar red and yellow inflatable floats pleasingly around on the pinboard. You can pick it up and move it (in a very un-balloonlike fashion) by dragging with Adjust. Alternatively, click with Select to open the control panel.



The arrows send the balloon in the appropriate direction; the centre circular button stops it in its tracks. You can also choose whether the balloon bounces off the edges of the screen, or simply drifts off one side and reappears on the other.

The 'change direction' option, when selected, causes the balloon to change tack of its own accord from time to time. A further option allows you to enable/disable rotation – the sprite mapping involved takes some time and will slow your desktop down a little. The speed of the balloon can be selected from a menu – this simply alters the number of null polls received by the program before it moves/updates the balloon.

The spinning of the globe is done in real-time and in BASIC too. The world map is scaled and distorted, line by line, using graphics windows. The balloon sprite, which has a circular mask for the map to show through, is overlaid. The rotation is done by simply scrolling the map sprite to the right using good old RECTANGLE TO. This takes a little processor time, but of course means the program doesn't need very much memory. To improve the performance, Philip has compressed the *!RunImage* file, but the original unsquashed program is included for reference.

Philip also suggest customising your balloon: "This is probably best done by editing the *BBCone* and *BBCone22* files in the *!BBC1.Balloons* directory – but be careful not to lose the originals! Basically, the 'canvas' sprite is the one that is stretched to fit the balloon. Leave three columns of pixels at the left hand edge – these are used as a workspace for the scrolling/rotation.

"The 'balloon' sprite is the outside of the balloon. Fill the centre of the balloon with a mask to create a hole for the 'canvas' to show through. Finally, the 'mask' sprite can be created by copying the 'balloon' sprite and filling all the foreground to one colour and all the background with the mask. The hole for the canvas should be filled with colour and not with a mask." Also, look at the *!Run* file for more details about loading customised balloons.

And if you have come up with a good logo simulation, you know where to send it...

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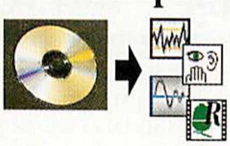
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!EMConvert
Convert Image Files to Acorn Replay Movies



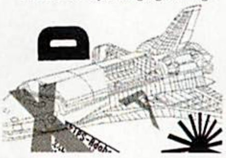
EMConvert
£15 inc VAT

EMConvert is a utility to convert individual sprite / image files into ARMovie files, with optional scaling and cropping of the images. In this way sequences of sprites created from weather satellites or from ray-tracing packages for example may be joined together to produce a continuous movie, without the usual memory problems imposed by traditional animation playback systems.

The type of images recognised by the Dir and Text convertors is as follows.

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RiScript Pro
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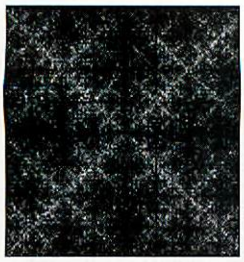
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Sierpinski Suite – part two

Author: Andrew Booker



Following on from Scott Boham's Sierpinski collection last month, **Andrew Booker** presents some tiny demos on the same theme.

Sierpinski is the latest of our sub-256 byte programs. It plots the famous "gasket", fading in from black. Like Scott's version, a greyscale is used and the colours of plotted pixels are incremented until they reach white.



"Lines", says Andrew, "is a similar program (slightly bigger than 256 bytes unfortunately), which draws an interesting looking pattern on the screen. It's probably got a proper name, but I don't know what it is". Well, it seems to produce an effect like Scott's *Square* demos, but I'm not sure what the proper name is either – a Squarinski Gasket perhaps?



Finally, *Space* "draws a random looking thing that looks vaguely similar to a picture of stars at night. Or maybe it's just a colourless version of the *Elite* map? Pressing Space (no pun intended) will generate a new picture."

Dr Vibe shows us how

Author: Jan Vibe

Our good Danish friend Jan Vibe has hung up his cycling palettes this month, instead providing some very simple and useful examples for the newby doodler. (Actually, I thought that was a village in Somerset.)

AnyMode demonstrates how to read the screen size so that your graphic ditty can work independent of the current mode. Basically, four OS_ReadModeVariable calls are needed – to find the number of pixels across and down the screen, and the respective eigen factors. The screen size is then placed into *XMAX%* and *YMAX%* and Jan draws a few squiggles to show it works – try changing the MODE 31 to test it out.

GetVar demonstrates how to read a system variable. Jan's example reads *Obey$dir*, *Sys$Time* and *Sys$Year*. The work is done by OS_ReadVarVal. This call can also be used to read multiple variables, using the wildcards # and *, and can also be used just to check if a variable exists. It's not a particularly friendly call – on entry it takes:

r0 -> variable name (may include # and *)
r1 -> buffer to hold value
r2 max length of buffer, or value < 0 (i.e. bit 31 set) to check if variable exists
r3 0 for first call - pass back to subsequent calls when doing a wild card read
r4 set to 3 if the expanded string is to be converted on return – numbers will be converted to decimal string and macros passed to OS_GSTrans. Otherwise, number variables will be returned as four byte integers and macros will not be expanded.

On exit:

r0 and r1 preserved
r2 number of bytes read
r3 updated for next call
r4 variable type (0 = string, 1 = signed integer, 2 = macro)

When using r2 = &80000000 to check if a variable exists, r2 will still be negative on return if it **does** exist and will be NOT the length of the value. Friendly huh?

MultiParm shows how to spot extra parameters after a program name, so you can run your BASIC program with a command like:

*MultiParm in out 47 Wensleydale

Multiparm can read up to 10 space-separated parameters, and does so using OS_GetEnv. This call takes no parameters and returns useful information about how a program started. r0 points to the environment string, which is usually a copy of the command used to start the program. Jan's demo simply extracts the separate parameters from this string. r1 contains the address of the byte above the last one available to the application and r2 points to a five-byte time – the real time the program was started.

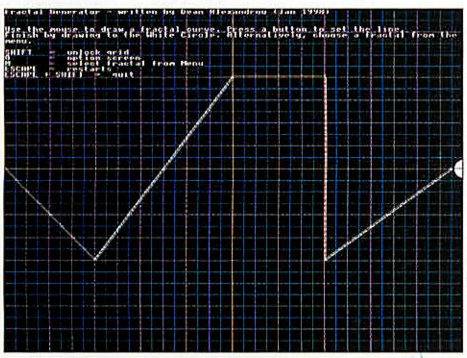
ListFiles simply reads all the names of the files in the current directory using the faithful old OS_GBPB 8 call. It also finds their types using OS_File 5. There are so many variants of OS_GBPB now that there isn't the space to describe them here. The most useful ones allow you to list files and information about them from a given directory.

Fractally my dear, I don't give a Koch

Author: Dean Alexandrou

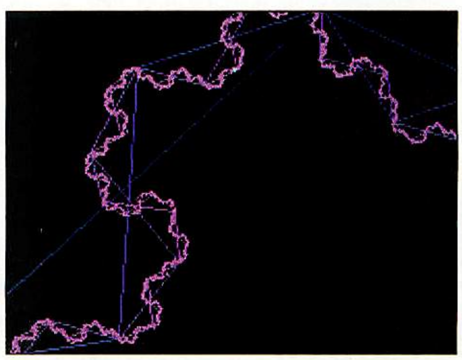
Some good old-fashioned fractal fun for all the family now from **Dean Alexandrou.** *LineFract* is a simple 2D fractal editor and plotter. Simply draw your basic fractal unit by clicking with Select. Your last point should be on the white circle to the right of the screen.

When complete, the fractal is plotted. A grid is provided to make fractal design a little easier, although you can select points in



between the grid lines by holding down Shift. There is a menu of ready-made designs – these include a 'simple hill', Koch curve, 3/2 curve and the Quaternary Dragon. (I thought that was a pub in Colchester.) An options screen also offers control over how the fractals are displayed – just use the keys shown to customise. The plots may be done using single points, lines or filled triangles. You can also alter the depth of iteration and by choosing 'gradual iteration' (this is set to ON by default) the fractal is plotted at increasing depth until the chosen limit is reached.

Another interesting option allows the fractals to be mapped onto a circle – these are plotted by a special routine (PROCcfractal) in the program. (Effectively, the left and right points on the fractal design screen become one and the same on the circumference of a circle.)

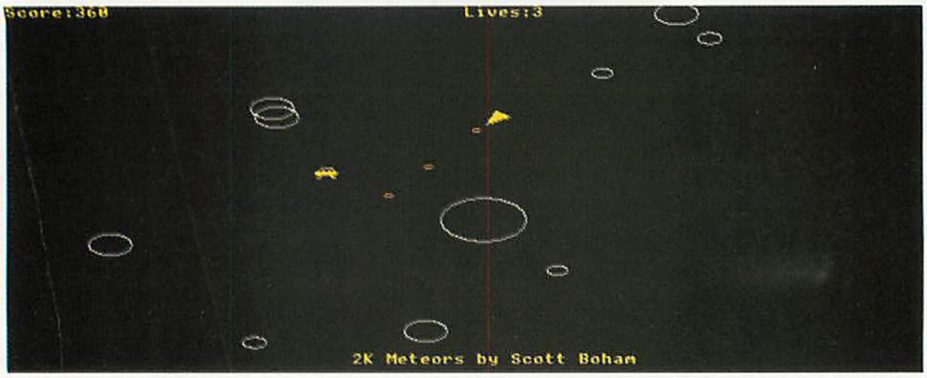


We shall be featuring an enhanced version of Dean's fractal program in a couple of months, so watch this space.

Get your rocks off...

Author: Scott Boham

...the screen with another classic game, lovingly revived by **Scott Boham**. This is a 1939-byte version of *Meteors*, so is an entry in our under 2K category. (Did we have an under 2K category? Well, I guess we do now.) Actually, 1939 bytes would have been a more appropriate size for *Bomber*, but I digress.

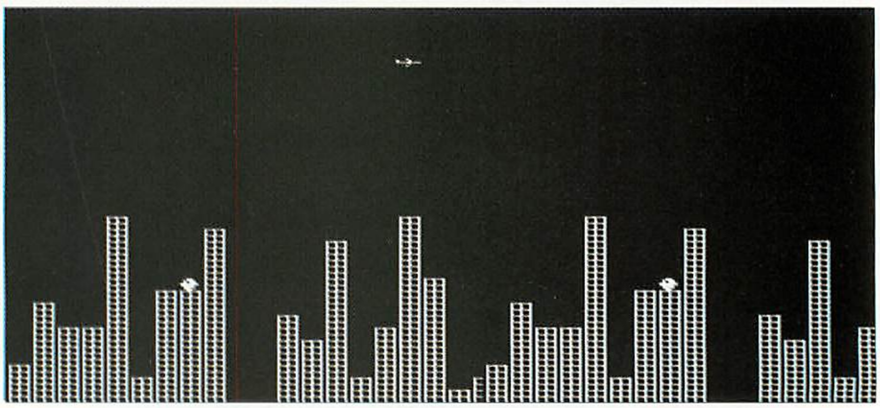


Select fires and Adjust thrusts (you can use the rhyme to remember that if you like). There is even the hyperspace feature of the original, activated by Menu. An extra life is awarded after every 10000 points, as per the original, and your friendly local alien spacecraft, complete with heat-seeking missiles will appear to hurry you along should be tardy in your rock-breaking. When I say spacecraft, it looks more like a Ford Escort, but then my interstellar vehicular knowledge is, admittedly, modest. *(Perhaps a Ford Prefect? Ed)*

What a bummer

Author: Scott Boham

Actually, that should be bomber. Our series of mini-games continues in style with a 430-byte version of the classic. It is recreated in glorious monochrome by **Scott Boham**.



As far as I can tell there is only one key, which is in fact a button – click Select to release the bomb. (Mind you, as one who progressed to the end of *TwinWorld* without realising you had a choice of weapons, I'll freely admit I'm no expert at finding all the keys for games.) If you do manage to raze the stylish conurbation to the ground, your mission will end with a congratulatory message.

*QUIT

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***INFO, *Acorn User*,**
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or, e-mail us (including your real address please) at:

austarinfo@idg.co.uk

No submission should exceed 100K. If your program takes a long time to do its thing, why not include a screenshot? Details about how your masterpiece works, hints and tips about customisation and so on are welcome extras too. We always have limited cover disc space, so cannot accommodate vast applications, tracker files or adventure games, however good.

You needn't include a letter but please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. A SAE will ensure your discs are returned. If you are responding to a challenge, please mark your envelope accordingly.

Compatibility table

Program	ROS 3.1	ROS 3.5+
AnyMode	Yes	Yes
GetVar	Yes	Yes
Listfiles	Yes	Yes
Multiparm	Yes	Yes
Lavalamp	Yes	Yes
Splata	Yes	Yes
Splata2	Yes	Yes
SplatAuto	Yes	Yes
!BBC1	Yes	Yes
!Pollster	Yes	Yes
!MK	Yes	Yes
Boingship	Yes	Yes
IKoMus ship	Yes	Yes
Sprng Srfc	Yes	Yes
Sprng String	Yes	Yes
Lines	Yes	Yes
Sierpinski	Yes	Yes
Space	Yes	Yes
Bomber	Yes	Yes
Meteors 2K	Yes	Yes
LineFract	Yes	Yes
FastFade*	Yes	Yes
InkBlot	Yes	Yes
SlowerFade*	Yes	Yes
SlowFade*	Yes	Yes

* Set RPC variable to 0

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Mike Cook's hardware series

A sound *investment*

Mike Cook brings his sound sampler project up-to-date

Last month I looked at making a real-time oscilloscope with some simple hardware derived from my 1991 *Micro User* sound sampler. The sound sampler project became a bit aged when Acorn brought out the ARM 3 processor as the cache had to be turned off before the software would work. Finally, with the introduction of the Risc PC and StrongARM, the software would not work at all even with the cache disabled.

So due to numerous requests at shows I have finally got round to rewriting the software to make it function on the new machines. As 1991 is quite some time ago and this is no longer the *Micro User*, I thought it would be worthwhile looking at the hardware at the same time.

The sound sampler was originally designed to work on machines with an output only printer port; the idea was that two of the output bits were used to generate the chip enable and clock and the data was fed in through the status register. The clocking waveforms for this ADC 0831 chip were shown last month. However, last month's circuit was designed to act as an oscilloscope and not process the input signal in any way. While this could be used as a sound sampler, it lacks two features. First, the signals you want to sample usually come from either a microphone or CD, both are small and need amplifying before they will deliver the full dynamic range of values from the A/D. Second, there is a problem of aliasing, at which point I refer you to Figure I.

When a continuous signal is sampled at any specific time interval and then those samples are used to reconstruct the signal, some distortion takes place. Exactly how much distortion depends on many factors, but the chief one is the ratio between the sampled signal and the sample rate. If the sample rate is very much greater than the signal, the distortion is minimal. However, as the sample rate approaches the signal frequency it increases.

At this time the distortion is in the form of high harmonics. This is not so noticeable and it is possible to filter them out. Look at Figure Ia – the signal is being sampled about three times per cycle. Here there is quite a bit of distortion but the fundamental frequency is still present. However, there is a critical point when the signal is sampled at less than twice a cycle. When this point is reached the fundamental disappears altogether and is replaced by a signal that is lower than the original one and so it can't be filtered out.

This lower signal is called an alias and its exact frequency depends on the ratio between the signal and the sampling rate. What is more, just a slight change in the signal frequency can cause a very large change in the alias frequency. This is heard as a low frequency growling grating noise that changes in time with the signal. Figure Ib shows what happens when a signal is not sampled frequently enough.

From this you can see how the simple rule of thumb about always sampling at

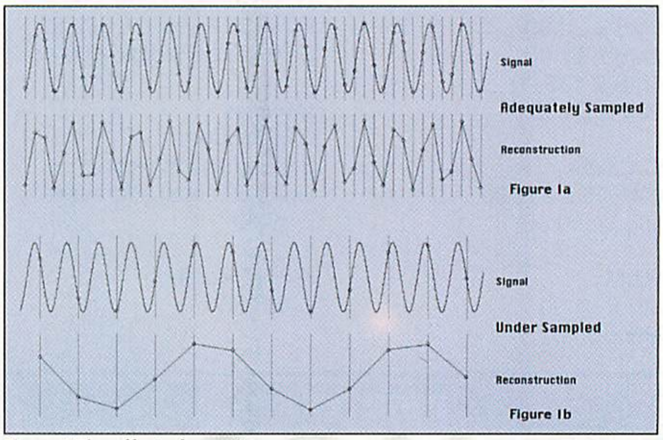
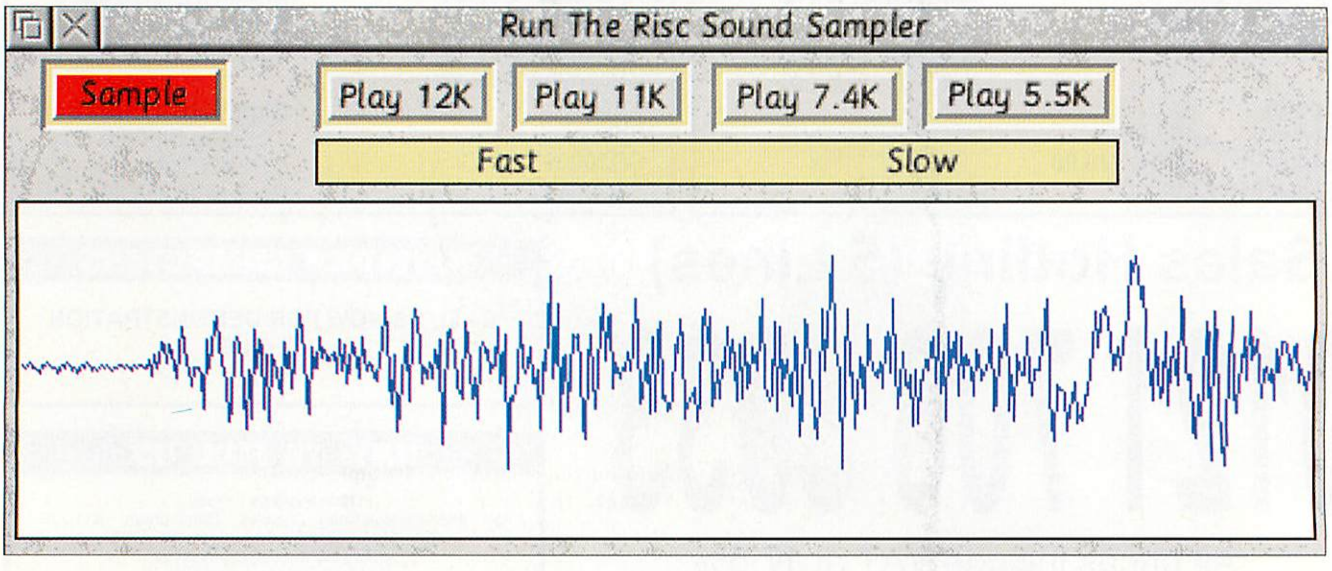


Figure I: The effect of sampling rates



twice the signal rate comes about. This point is called the Niquis rate or the Shannon criteria. A popular myth is that if you sample at this rate you will be all right. In practice you can see you will get quite a bit of higher harmonic distortion, and that only applies for sine wave signals, more complex shapes need more sampling.

Well how does this affect our sound sampler? In order to avoid this aliasing we need to filter the input signal to make sure that none of these higher frequencies are passed to the A/D converter. So that's why the circuit in Figure II is a bit more complex than last month's.

The extra circuitry provides first a signal boost and then a bit of low pass filtering. I used the TL064 quad operational amplifier to act as both the filter and level amplifier. As there are four amplifiers in this package I have used two for the filter and two for the level amplifier. In order to "read" this circuit we must start at the top and zig zag our way down.

The microphone input connects to a non-inverting amplifier, having a gain of approximately 20. This can be bypassed by plugging something in the Line input socket, the jack contacts will disconnect the output of the first amplifier from the second. This is useful if you have something with a much higher input level than a microphone like a CD player. The second stage amplifier has a fixed gain of about 100 but the 10K variable resistor can be used to turn down the input and so get a wide range of signals out of pin 8.

This is coupled to the filter, the middle row of circuitry in Figure II. First of all the 10K and 8K2 potential divider establish a DC level for the signal. Then the next two amplifiers act as a low pass filter. The output of this (pin 1) is fed into the positive voltage input of the A/D converter.

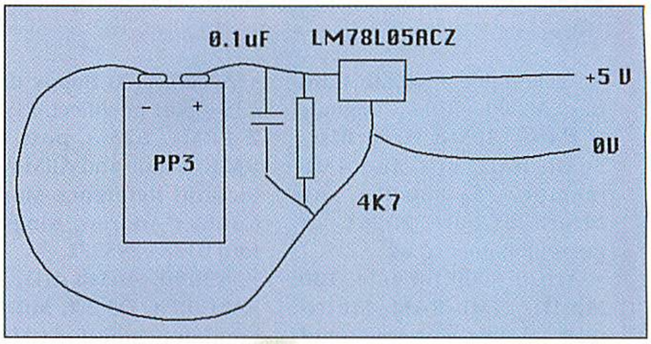


Figure III: Battery power supply

Again the DC level is restored to the mid point using a pair of resistors. This also lowers the impedance of the input of the A/D, and I found this reduced interference picked up by the input. The negative input of the converter should not be tied directly to the zero volts line but to about one volt above it. The converter only used the difference between the positive and negative inputs, and so the negative input must be tied to a low voltage. However, the operational amplifiers can't swing the signal over the whole range of the supply voltage but to only about a volt of it. Therefore in order to maximise the range of the 8 bit A/D we must put this voltage input about one volt above zero volts. This is done with the 47K and 9K1 resistors.

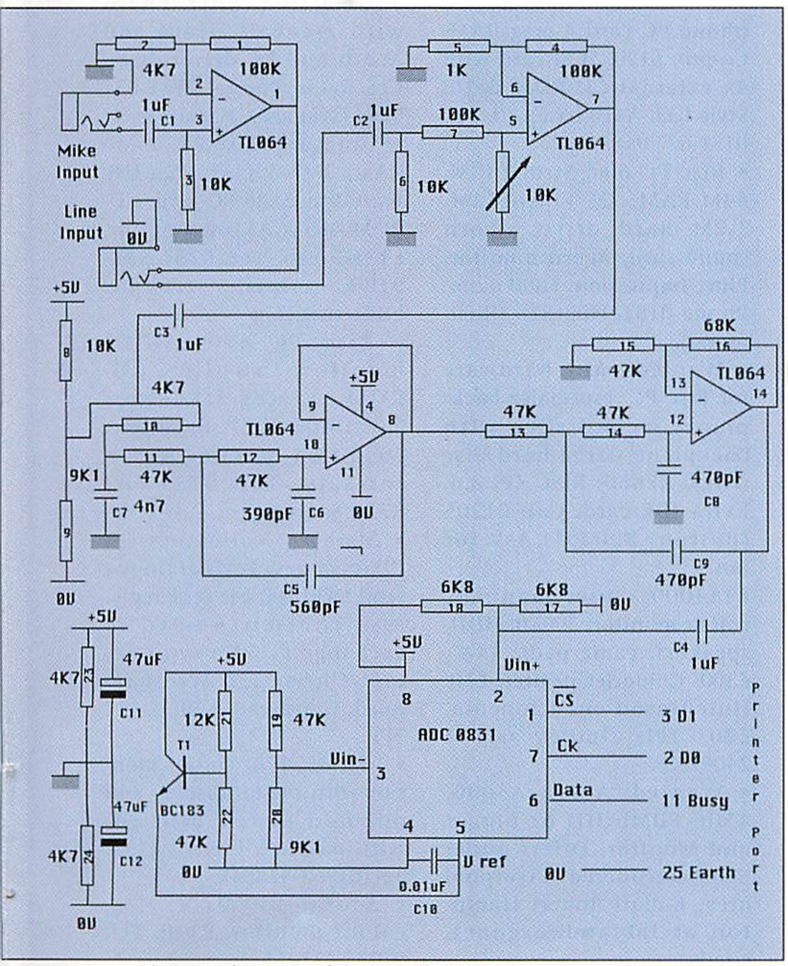


Figure II: The circuit of the sound sampler

By a similar argument the maximum signal voltage is only 4 volts and not the 5 volts of the supply. Therefore the converters reference voltage must be placed at 4 volts in order to get the full range of conversion. We could use two resistors just like before, but this input requires more current as it has a lower impedance.

This could be achieved by making the resistors have a lower value, while maintaining the ratio for the correct voltage. However, this also increases the current drawn, almost doubling it in fact. So instead I have used high value resistors and fed the reference input from a transistor used as an emitter follower.

Finally, in order to bias the filter amplifiers properly we need a mid voltage point or signal earth. This is achieved by using two 4K7 resistors and two 47uF decoupling capacitors.

Finally the circuit needs feeding with 5 volts. On my machine I have tapped this from inside and brought it out to a socket on one of the podule panels. If you feel that you don't want to mess about with the inside of your computer then you can run the sampler off batteries. This will require a battery clip and a five volt regulator as well as a PP3 battery, the circuit is shown in Figure III.

The printed circuit board for this project is still available – see the help file inside the software application for details. Which brings me onto the software itself. This drives the hardware to produce samples at four different sampling rate 12KHz, 11KHz, 7.5KHz and 5.5KHz. This allows a compromise between quality and length of sample and seem to be among the standard rates used by other systems.

The samples can be stored to disc as raw samples, in the form of 8-bit unsigned samples. Any sample player should be able to cope with this and convert it to the format you want to use. For convenience the sampler software will allow you to play back the sample, but there is a very slight wobble in the sound – most of the time you can't even hear it but it shows up on an oscilloscope trace.

As I use a PD playback module by Jason Williams I haven't been able to track the problem down, but it has something to do with the interrupts. Also, the playback rates are not as accurate as the sampling rate. Again I found that only certain bits in the playback parameter actually affected the playback rate on the newer machines. Anyway most of the time you will be using the samples in some other system or player so it's not so important.

Well, there you have it. If you have the old sampler lying about gathering dust you can use it with your new machines, if you haven't then here is a very low cost way of getting into sound sampling. AU

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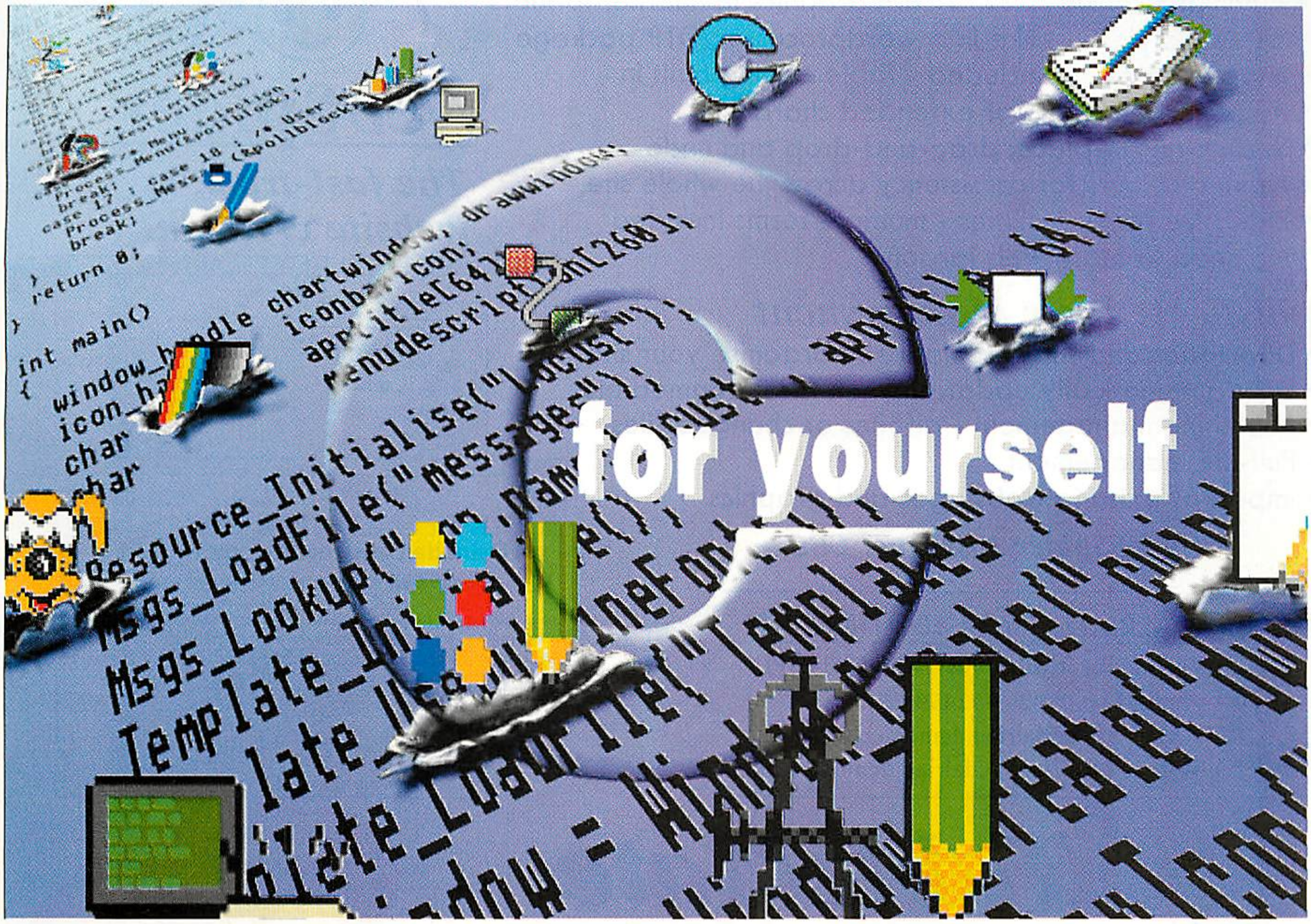
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• Acorn A3000, 2 Meg, colour monitor. £110. Tel: 01935 425974.



JACK KREINDLER

Steve Mumford considers the user interface of our prospective label printing application

Now that we've investigated the methods of displaying *Draw* graphics within the RISC OS environment, we can take a broader look at the construction of the label printing application itself and make some educated decisions about the data structures we're going to use.

These will influence the directions in which the application can grow, so it's worth thinking about the implications before we start. We also need to look at the methods of data entry; it's no use creating a flexible data format if you have to go through seven hells to get the information in there in the first place.

Several months ago I mentioned that my proposed user interface to the label database would take the form of a stack of index cards; this technique is one that many people have been exposed to, so should be one that can be picked up instinctively. To navigate between the fields of a particular record, one can either click in the appropriate place or, especially if a lot of data has to be entered, by pressing *Return* or *Tab* to cycle through the available fields.

In our case, the design of the label, including the number of available fields along with their positions, is created by the user, so matters might not be quite so straightforward. However, if we assume that the fields are going to be arranged in a sensible order on the form, stepping through them in this manner will still be useful.

Originally I had planned to use the available size of each label to allow the program to guess at the number of lines of text it could squeeze on and position the fields appropriately, but it quickly struck me that this method would be far too inflexible to be of any real use. Having said that, arranging the fields on each new label by hand would be too time-consuming.

The best solution would seem to be the implementation of a 'master label' which is defined by the user when they first create the database. At this stage they can decide how many fields they want to include, as well as their positions, font sizes and so on. Once this has been designed, the gross layout can be copied over to each new label as it is created – assuming that no changes have to be made. This will allow the user to enter their data quickly without having to worry about setting out each new label.

Although having a 'master' to control the overall format of the labels is desirable, allowing the user to change field position, font type or size, it would still be beneficial to allow each label to be modified individually. By copying the characteristics of the master label rather than referencing them directly, we can retain this ability at the expense of some memory space.

This does pose an additional problem in that some of the advantages of having a template are lost if the labels are freely modifiable after creation – if the layout of half of the records have been edited since their creation and the master label is then changed, do we re-impose the master's formatting on those modified labels, or leave them be? This potential problem could be solved by forcing the user to 'check out' any records he or she wished to tweak, and at that stage the affected label would no longer be linked to the master. Reversing the operation would remove any supplementary changes and restore the master formatting.

When considering the application's data structure, it can be seen that several natural levels exist. At the top of the tree we have information that has an effect on the entire program, such as label or paper size. The next level would include the layout of the master label, with a standard set of field positions, along with any non-editable labels or borders if necessary. Finally, there's the level that contains the bulk of the data – the actual text for the fields of each label and any bits of additional clipart.

Within these levels, particular data units repeat themselves, so we can develop the idea of a text or graphics 'object' which, for instance, might consist of an (x,y) coordinate, a string of text and a parameter block holding information such as font size or type. These objects can be used throughout the data structure to standardise and simplify data manipulation, as well as providing the database flexibility we're after.

When we're ready to store all of this data in memory, we can take the pre-prepared blocks outlined above and string them together to build the data tree. The label data could be stored as a linked list or an array of pointers to '*label*' structures; each one of these would then contain lists of text and graphics objects. We'll look at an appropriate set of data structures next time – see you then. AU

Isn't life unfair? Following the success of my I²C temperature monitor I thought I would make a humidity project, especially as there was a nice one in the Maplin catalogue. It was self-contained, had a digital display and the numbers were multiplexed on digital outputs. Just the job I thought, so I modify the DVM application to display relative humidity, design the interface and nip off to Maplins to buy one.

That's when it all went pear-shaped. "None in stock sir. Shall I order it? Oh, it appears to be obsolete". All that despite the fact it was in the new catalogue that had only been out a few weeks. If it ever makes a reappearance I have a project waiting.

This month I have been playing around with my MIDI interface and come up with a little program I call, imaginatively enough, *MIDImouse*. I was showing it off at the Wakefield show and the sounds it produced attracted quite a bit of interest. It's a sort of software version of my sound square – mouse movements are converted into MIDI notes output on channels 3 and 4. There are separate notes for the horizontal and vertical movement of the mouse and you can define the key it plays in.

For each mouse position you can have up to three notes played at the same time. When you first move the mouse pointer into the window nothing happens until there is a click, then notes are produced as long as you keep the mouse in the window. If you drag the mouse with the Select button there is no new note sound until the key is released.

The same happens with the Adjust key, only the note being played is terminated. So to end a composition simply click Adjust and drag the pointer out of the window. Holding down Ctrl and Alt freezes the mouse movement of one axis. I have found the best tunes, or ambient noodlings, are when one axis plays a continuous drone note which you can do by choosing a voice with little decay from the Synth Effects part of the GM voice palette, and the other axis plays a shorter lived voice like bells or organ.

I found the trick is to move the mouse infrequently in small steps to give an ambient/trance-like sound. However, you can map the movement to any sounds you like. As a bonus this month I have put it on the cover disc for you to try, always assuming you have something that will make a noise when it receives MIDI data. If the editor has been kind then there is a sound sample of me playing on the *MIDImouse* on the disc, it's called MM7K4, play it back at 7.4K rate although it doesn't sound wrong at any speed. It's in a pentatonic scale and so it sounds slightly Chinese.

On with response from past rambles, Brian N. McQuillan from Winmalee, Australia e-mails:

In the March 1998 of Acorn Wood Martijn van der Mei was looking for LBPIII CaPSL drivers. Well, Oak Solutions/Ace Computing used to put out a program called *Prodriver* that contains a CaPSL Canon driver. The set on the *Acorn User* July '97 cover disc (2) is only for Postscript versions of the LBPIII as far as I know.

Now for the new problems. First off Chris Murray is wondering about the demands placed on his computer by the Internet:

I have an early Risc PC 600 which I have upgraded with RAM, CD and StrongARM processor. I am about to sign up to an Internet provider. However, my hard drive is only 210Mb and is about 75 per cent full. The machine is mainly used for accounts and DTP work and games for the children.

I am expecting the Internet to make some demands for disc storage. Can you tell me what the best course of action is for data storage now? Would a zip drive be more flexible than upgrading to a larger hard drive or even an additional hard drive.

My calculations show that you probably have about 50Mb disc space free, which I think is adequate for the time being. The Internet only places demands on your hard drive if you start hoarding lots of downloaded images and applications. The Internet software itself is unlikely to make a very big dent in that.

You have managed to live quite comfortably with your drive until now which suggests that you don't make great demands on it. When you do find you have filled up your disc it is surprising how much space you can free up by looking round and deleting stuff that you haven't accessed in years.

However, when you really have to upgrade, swapping your drive for a bigger capacity is a bit tricky because you have to get all the stuff off the old drive first. As you have a CD drive, simply fitting another IDE drive is out of the question, so any extra drive would have to be a SCSI and the interface card for that would push up the price. I would think at the moment that your best bet is the Zip path as these drives are now quite cheap and the supply of discs is plentiful.

Adam Merrifield wants to expand his horizons:

I own a Risc PC and would like to know whether there is an Amiga emulator which will allow me to run Amiga software (at any speed!) on my Risc PC.

When I was asked about a Spectrum emulator years ago I was surprised to find one. I don't know of an Amiga emulator – can anyone surprise me again?

Tom Pegg is trying to get onto the Internet, he writes:

I intend to buy a cable to connect my Psion Dacom modem to my A3010 and read that by issuing a SWI "OS_SerialOp",0 the computer will use a different line for handshaking so that an over-the-counter IBM type cable can be used instead of a specialist one bought from an Acorn dealer. Is this true?

The call can be used to alter the handshaking status but you have to know what you want to change. There is no such thing as a standard cable in the murky world of RS232 although you can have a 'straight cable' or a change sex cable along with lots of others that try to compensate for missing signals.

In my experience the same cables that work with a PC work with an Acorn without modification. All the SWI call will allow you to do is to ignore some of the handshaking signals. If you do this you run a risk of missing data when your buffers become full. All the information for this call, three pages of it, is in the Programmers Reference Manual but as you are trying to save on the cost of a cable then I think you will balk at the price. Therefore I have put details of this call on the cover disc.

John Benton from Rishworth, Halifax wants to know how to record the sounds he makes with his computer:

My problem lies in getting a reasonable quality recording of sounds made on my A4000 for a sensible price. I compose a lot of music on my computer (in *Rhapsody* mainly), which I wish to record onto cassette tape.

I have tried various methods of recording, but surely there must be a better way than from the speaker, through the air, to a tape recorder. If I do this, I get so much interference from the air and the music quality is poor and unclear.

Is there not some cable I can buy which goes from the computer headphone out socket to a jack plug which I can insert into the microphone socket of a tape recorder? Or, since I have a MIDI interface, is there some way of connecting the two machines? I would be grateful if you could ➤

Rambles through Acorn Wood

Another question and answer session with **Mike Cook**

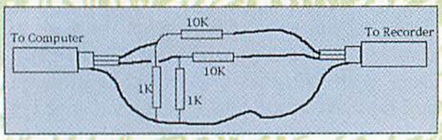
Rambles through

Acorn Wood

help by giving some advise as to where I can purchase something to do this.

You can't connect a computer to a recorder using MIDI, that is only useful in connecting instruments and sound modules together. However, a simple stereo jack to jack lead can be purchased at almost any electrical or Hi-fi shop and should provide you with a great increase in quality.

The only problem is that there may be too much output from your computer for the microphone socket. If this is the case then it will sound distorted, you might have a line input to your recorder, try that. If the results are still distorted then cut your lead in half and wire up the circuit shown in the diagram.



If there is still too much signal, make the value of the 10K resistor bigger, say 22K or so. If there is too little, make the 10K resistor smaller. Resistors can be purchased at Tandy, Maplins or any local electronics shop.

I did get an e-mail the other day but unfortunately it disappeared on the journey between work and home on a floppy. Apologies to the sender but it went something like this:

I have a Yamaha MU10 sound module with a MIDI input and output. However, it also has a serial socket for direct connection to a computer. As I have no MIDI interface I was wondering if there was any way to switch the MIDI calls to the serial port so that I could connect it up the MU10 and then have a MIDI interface as well for other equipment?

There is no simple way to switch the MIDI SWI calls because they are not part of the machine operating system. When you get an Acorn MIDI interface card this contains a ROM which loads the calls into memory when switching on. Other MIDI cards have software modules with the calls on but hardware directed to their own interface. However, at the recent Wakefield show I did see a product from ESP that will help called Serial Port MIDI, which just about says it all. I had a chat with them on the stand and it appears it will do what you want and it even includes a cable.

Jerome Mathevet jumped the gun on this month's Run the Risc, but he wants more:

I would like to have an Analogue Digital converter to build for my A5000, mainly to record speech samples so I took a look at the *Acorn User* site but the only approaching circuit was the digital voltmeter, which uses the parallel port (unless I'm mistaken).

In my opinion, this isn't fast enough for speech and, worst of all, the sampling rate will not be steady. Is there any chance that I will see a circuit plugging as a podule, with 12-16 bit resolution at a maximum frequency of 50KHz in a future issue of *Acorn User*? I don't know if there exists a low-cost IC that could do that, but if you want to undertake the project I would be most delighted.

See this month's constructional article, it's not up to your spec but it is certainly more than adequate for speech. There is little point in sampling at 50KHz as there is so little energy at such high frequencies in speech, even female voices. The sort of resolution you are asking for is in the CD-quality music camp, not speech.

The other problem is that home-construction of a Podule is not really an option. I have made several Podule interfaces and found that home construction prototype techniques do not produce very reliable cards. This is due to the high frequencies involved on the buses, it really demands a four layer printed circuit board. Once you produce this you up the price of the project considerably and take it out of the low cost area. However, I do plan to have a faster multi-channel A/D converter in a future project so you can sample at higher rates if you want.

Steve Smale is planning a project and wants some advice:

I'm currently contemplating building an "electronic" clarinet for use in a band I play in – the idea being I will no longer be restricted to a single sound, but can choose any sampled sound and still use a fingering system I'm used to.

I've got a "spare" A3000 motherboard which would be ideal for this as it can be built into a specialist easy-to-move-about box including an amp and so on. Can you tell me what is the best method of getting the inputs into the A3000?

I would need 16 switch inputs (open or closed) – although there are more keys than this, some combinations would never happen, so some can be connected to the same input. I would also need an analogue input from the breath control to provide control over starting and stopping sound and for volume. I'm a bit confused about what's possible with the parallel ports on these earlier machines and whether or not it's actually possible to get inputs in through them – would IIC be a good option for the breath control?

Are there any other "cheats" I can use (for example the mouse port has three switched inputs I can use – can either the x or y ref inputs be used for the analogue breath control?) I'd be really grateful if you could point me in the direction of the circuits and connections I would need to do this. I'm all right with simple stuff like BBC B user ports but don't have much of a clue with the Arc side of things, especially on the old hardware.

Sounds an interesting project, but using an A3000 does sound a bit like overkill, especially as there is a bit of interfacing to do. You will need some form of display for the computer as well as inputs and outputs. The A3000 has a bi-directional printer port, so that allows you to get 12 inputs straight in, eight data and four status.

However, that's not 16, so you could use two of the IIC PCF8574 digital chips to give you that many inputs and a PCF8591 will give you the analogue input you need – see the December '95 *Acorn User* article for information on that. You could use the printer port and multiplex the data in like my September article of the same year. October '96 saw the PUP interface that gives 16 inputs from the status lines on the serial port, you could couple that with the analogue joystick interface on the printer port in June the same year.

A look at the A3000 circuit diagram reveals that there may be scope for one or two cheats, in the form of spare lines on the IOC chip, but they're not that easy to get at through the software as you need machine code in the supervisor mode. I'm not too sure how much of the computer you want to use to make the noise or play the samples, but if you are going to use MIDI you will need a MIDI interface as well. That means you will need to add quite a bit to your spare computer board.

I think the best solution would be to use a PIC controller to make a dedicated standalone system, it would certainly be much smaller than using an old computer. As you get 13 I/O lines on these chips I would use a simple two in one out multiplexer on eight of the input lines, you get four of these in a 74LS157, that gives you the 16 digital inputs you need.

One extra line would be needed to control the multiplexes, then use three lines for the serial A/D converter used in this, and last month's project for your breath controller. This leaves one line that you can use as a MIDI output. There you are, four chips make a much smaller project. Anyway, whichever way you decide to go, best of luck. AU

Contacting me

You can contact me, Mike Cook, by post at the usual *Acorn User* address or by e-mail at: auqanda@idg.co.uk

Canon competition



We've got two BJC-7000 printers to give away courtesy of Canon

You've read the review, so how about winning a BJC-7000 printer? To be in with a chance, simply answer the questions and send back the form to the address below. Entries to be in by 1 September 1998 please. The editor's decision is final.

Canon competition

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- ◯ Seven-colour ink printing technology
- ◯ Twenty levels of gradation

2. What quality of colour printing does the BJC-7000 give?
- ◯ Photo
- ◯ Photocopier
- ◯ Hand copied

3. What does P-POP stand for?
- ◯ Plain Paper Online Printing
- ◯ Printer Point Of Presence
- ◯ Plain Paper Optimized Printing

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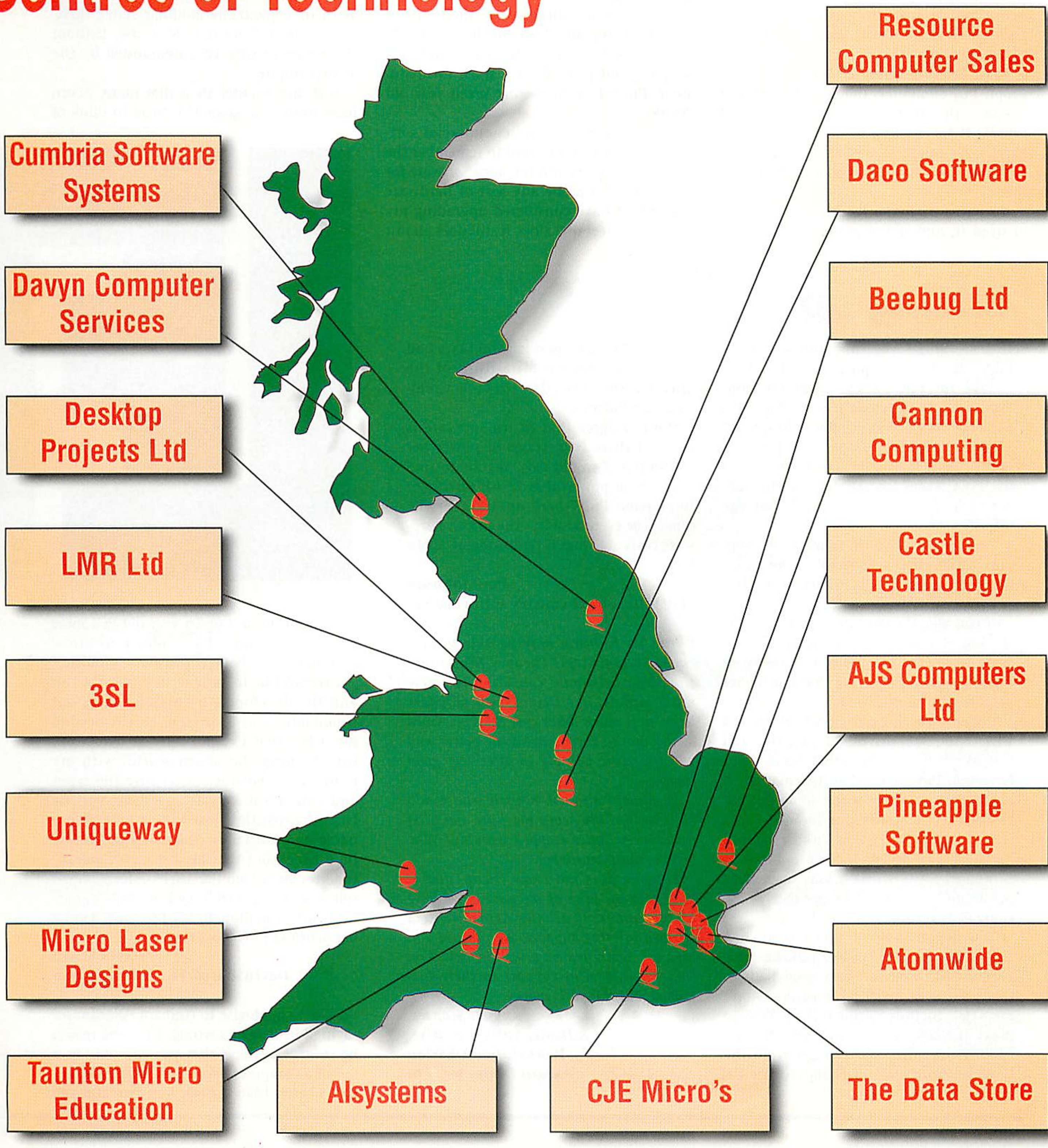
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Fan mail

Graham Peterson's "Manchester United" analogy is strangely apt; his demand that all Acorn users upgrade regularly, whether they need it or not, reminds me of football "fans" rushing to buy the latest kit every few months.

Not that I'm drawing parallels between Acorn and Man U; the connection is the assumption that support must be expressed in terms of cash.

Is Mr Peterson seriously demanding that people buy computers they don't want, just because the money's going to a "good cause"? If we're going to treat Acorn like a charity, we might as well save their manufacturing costs and start donating money to them.

If I buy a computer it's because I want it or need it, and if I'm going to donate to charity I can think of more deserving causes than Acorn.

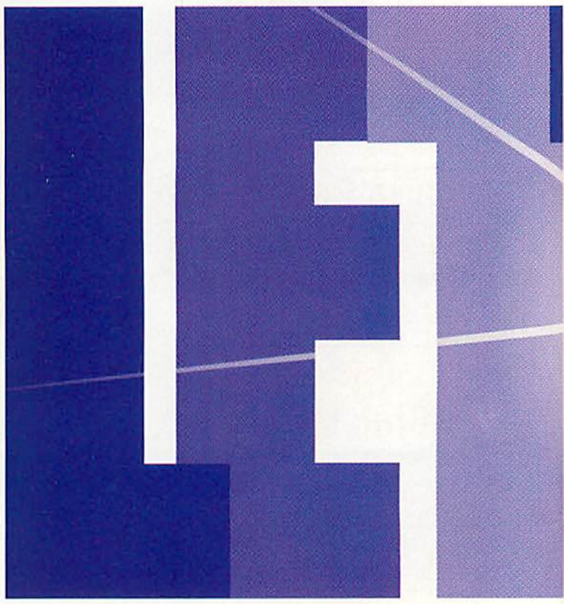
Pontus Lurcock
Oxford

I'd have to say I'm more than a little outraged at Graham Peterson's letter concerning an Acorn fan's devotion relying solely on their willingness to shell out for the latest upgrade. I would dearly love to have £1000 lying in the bank to spend on a Risc PC, but instead, as a sixth form student, I'm forced to use my seven year old A5000.

I don't regularly buy commercial software, in fact I find it hard to remember the last time I shelled out for some software for my Acorn, let alone any sort of hardware upgrade. I have considered upgrading my A5000, but feel that since it still does almost everything I want it to, and I can use my father's PC for the other tasks, the expenditure is not warranted.

It is a testament to Acorn technology that this is the case, even though they won't profit from constant upgrades. Indeed the Acorn machine is well designed enough that frequent upgrades are unnecessary. With its expandable modular system RISC OS can well stand long-term use, without the frequent upgrades demanded by the Wintel empire.

Is it any wonder then that many Acorn users haven't upgraded? I dread to think of



the condition of a seven year old PC. Some of us simply don't have money to throw around needlessly on expensive equipment.

I would like to be able to support Acorn and the developers by helping them out financially, but at present this is beyond me. I feel that I've put a lot of hard work into helping the Acorn world, with my renowned websites concerning file types and emulation as well as writing various freeware utilities (just take a look at my name on both Public Domain pages in the June issue) and that Mr Peterson's ingratitude for many similar user's efforts, based solely on the fact that we have little money to spend, is shallow to say the least. Am I a big Acorn fan? You bet I am!

David Sharp
DavidSharp@ThePentagon.com

I'd like to apologise to Graham Peterson for saying I believe he's wrong. For some reason he seems to believe that you can only be a fan of a computer if you can buy a machine that's better than the one you own and you

Pricing up

Here's a thing I was wondering about last night. Are Acorn suppliers ripping us off?

Take the Plustek 4831 scanner from Pineapple. If I exclude the postage, it's £150 for which you get the scanner and TWAIN software. Dixons are currently doing the 4831 for £80. The software (I'll use TWAIN and *ImagePro*) is another £25 from David Pilling. Total, £105. Net rip-off £45.

Parallel zip drive, from an Acorn supplier again around £140 (inc software). I bought mine from PC-Direct for £105 (with four discs).

If you take the current price from a PC stockist of about £82 and add on say £20 for the software (from the likes of Desktop Projects), we see that bar £2, we are down by another £40.

Probably the biggest rip of all are CD writers and SCSI drives. I'll take the SCSI first. While I understand that Acorn don't have that large a share of the market, it comes to something when some peripheral makers actually put in SCSI cards with their bits for PCs. As I understand it, for the RPC a decent SCSI costs between £100 and £130, while a Mac user forks out around £60 and PC owner £50 for the equivalent version.

CD writers are a rip off for us. If you buy one from Cumana, you're talking £300 plus, yet I've seen the same model advertised in one of my local hardware stores for £160. Include *CDBurn* from WSS to make it £210, we lose out by almost a £100. Worse still, you can get from the USA the same burner (adapted for UK use) for £110 (inc. postage and taxes and also digital cameras for a third of the price, but still covered by the same worldwide guarantee).

While I agree that Acorn software is the best there is in terms of power per pound (e.g. I would defy anyone to find anything as powerful as *TechWriterPro* or *Impression Publisher+* on a PC for the same – or even double – the price), hardware costs are what is punishing us Acorn bods.

Paul Johnson
P.F.Johnson@chemistry.salford.ac.uk

While Mr Johnson may be able to purchase several items cheaper from other suppliers, he should consider that large retail outlets, like Dixons, will purchase items at a much lower cost than an Acorn dealer due to their purchasing power and will therefore be able to offer very good prices.

He should also ask himself who would he turn to if his Acorn machine and SCSI device or scanner stopped working? Who has the most experience?

Support does not come cheap, and is built into the price of the goods. You have to remember, if all the Acorn dealers stopped offering support, who would you turn to? Acorn dealers pride themselves on their high level of support to their customers, but this costs money.

Russell Scoates,
UK Dealer Sales Executive,
Workstation Division
Acorn Computers Ltd

can forget the cost. If I had begun saving for a new machine 10 years ago I'd have been 11. I recently bought my first Acorn machine. Not because I felt that I needed to or because I felt any great commitment to Acorn, but because the opportunity arose.

I consider myself an Acorn fan and being a fan is in no way related to how often you buy a computer. Maybe I'm in a minority of one here, but I thought that being a fan meant that you believed in something. I'm a fan of X, but I don't have a Sparc 5 sitting in my room. If anyone thinks I'm not an Acorn fan because I won't go and buy a new computer just because 'the company needs it', then so be it.

I reserve the right to think that they are being petty though. Next time someone says they are a big fan of Acorns check they know what they are talking about, not their machine.

Justin Fletcher
gerph@essex.ac.uk

Front cover fantasy

As a hot-blooded 23-year old male who usually reads *Loaded* and *FHM* it was a nice surprise to see your cover graced with an attractive female on the June issue. Imagine my disappointment when I turned to the relevant article to discover no mention nor picture of her. Ah well can't win 'em all.

Gareth Edmondson
BEDEDMG0@trinity-cm.ac.uk

PC problem causing?

I had some problems trying to run the *Wizard Apprentice* from the June cover disc now I find I run into similar problems with a number of games downloaded from the "Arm'd & Dangerous" website.

The problem seems to lie in modules loaded by *!PCPro*. I have experimented with RMkill'ing some and had inconsistent success when *pcmem* is removed but *!PCPro* falls over even if you reload the module. So far the only cure is to run the games after a restart.

I'll keep working on this and let you know if I get anywhere, in the meantime I hope this may be of some use to any readers having similar problems.

Keep up the good work

John Purser
john.purser@lineone.net

Mavica JPEGs

On the cover disc of the July issue to my surprise I found *!MavicaFS*. The !Help file stated that "This program allows you to read JPEG files created by the Sony Mavica digital camera. They are otherwise unreadable by most RISC OS applications because they have a non-standard header."

That's strange because Acorn have gone to great lengths to keep *!ChangeFSI* up-to-date. The current version is 1.15 and is always freely available. I have been using this and *ImageFS2* Ver 2.36 for some months now to read Mavica JPEG files. So all Acorn users can read Mavica JPEGs if they bother to update their software any time since 21 February 1996.

I think this version has also been on an *Acorn User* cover disc or CD at some time.

Paul Robinson
Paul@havaccnt.demon.co.uk

TERS

Code protection

This is something that has been irritating me for some time. When I was learning to program the RISC OS machine I began by taking apart lots of PD programs, seeing what they did and changing them to do even sillier things than they already did. *StickyBD* was a particular memory because it was a very simple concept and had a quite clear structure to it.

However, recently I've been seeing so many people using *BasCompress* to crunch their code and then worse still, making it into an *Absolute* file so that you have to go to incredibly circuitous lengths to get to any kind of sensible code. Not something that a learner would want to do.

The reason that this irritates me is that I'd have no hope of learning from these programmers. Their programs are obviously very good because I can see what they do. However, I would never be able to learn anything about how they work or teach myself anything from them.

Is it really that important to hide your code away? Are you that ashamed of it that you feel it should be kept behind two levels of 'protection'? Perhaps you don't want to help your fellow programmers to learn what you have learnt and so increase the quality of programs out there?

Personally I think it's the narrow-minded latter attitude, but I'm sure there must be someone who disagrees?

Come on, if you want to make your code faster by all means *BasCompress* it, but leave a copy of your source so that we can marvel at your superior programming skills. Please?

Justin Fletcher
Gerph@essex.ac.uk

Air your views

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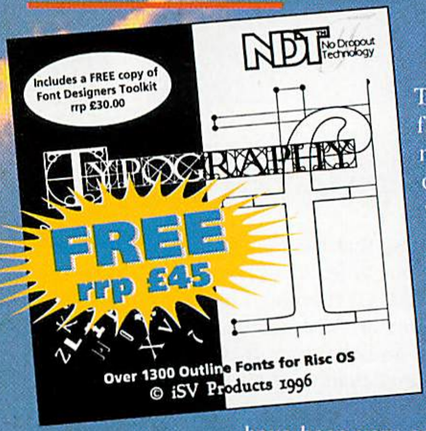
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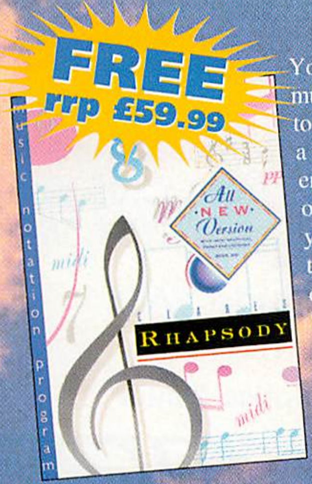
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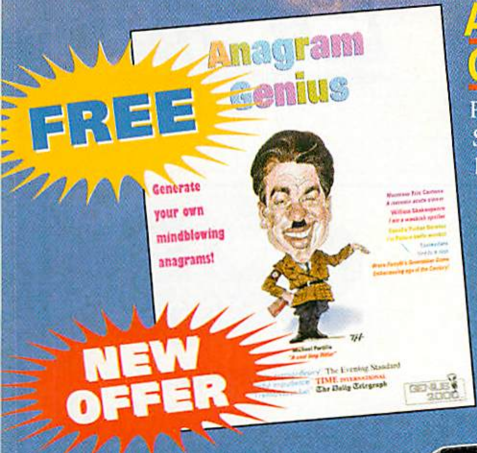
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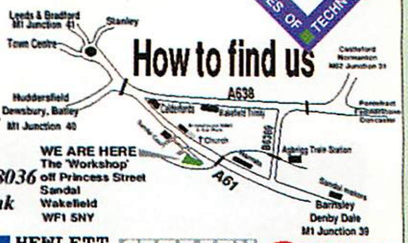
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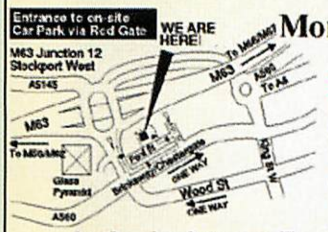


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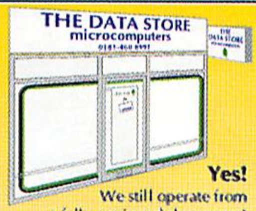
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the Regan files



Paul Beverley

'Downsizing' is an American buzz word which is frequently branded around multinationals. The last place I expected to find it was in the Acorn market, but Paul Beverley is downsizing himself.

Paul Beverley runs *Archive* magazine and he used to run Norwich Computer Services, but by the time this goes to print the dealership will be run by Chris Evans at CJE Micros.

I find myself sitting in the nearly bare offices of what was once NCS. Instead of presenting the last view from a shipwreck, I find Paul to be a very open, optimistic person.

'I had got to the stage when I did not have time for people,' begins Paul tentatively. 'People would come into the office and I did not have time to chat. In the last four years I have only had two one-week holidays. When you get to the stage that you do not have time for people, there is something wrong.

'I do feel that the way society is going is that everything has a price. Any decision made is to do with The Bottom Line; we have lost a sense of community. I think that is dangerous for society. I cannot change society, but I am going to make jolly sure anything I take part in has community.

'I think the Internet can be the virtual community. People enjoy chatting and being human. I think the Acorn community is great – I call it the Acorn family.

Things started to go wrong because Paul (as he himself admits) was not much of a businessman. When there was money in the bank he would use it. Most of it was given away to people in need; Paul was, and is, a philanthropist. I saw the graph – in one and a half years Paul lost £90K.

'The financial position was so bad that I *had* to keep on trading. If I had been a limited company I would have been insolvent; I owed more money than I had assets. It was 1993 and Acorn did not launch anything. It was a desperate situation and I got very depressed.

> 'I think the Acorn community is great – I call it the Acorn family'

'We are just by the hospital here and my friend was chaplain there. On his day off he used to pop in here and make cups of tea and just chat. It was Wednesday – accounts day – and we would see what we could pay off.

'One morning Mike said "How is it going?" and I said "I want to go home." Mike drove me home and I spent the whole of the day on the settee quaking and panicking. It was desperate. I gradually clawed my way up from depression and it was a cliff-face job edging back up financially.'

Paul managed to 'get back', even though he knew he could make money through Phoebe (when the Risc PC was announced he had, within a month, orders worth a third of a million). He decided it was time to get smaller, but he did feel responsible for his loyal customers from the Acorn market. So he found Chris Evans to take over the dealership.

I am looking at Paul's life-line, which is a long line on which he has written in chronological order events in his own life and that of Acorn. No wonder Paul sees the Acorn market as a family. Paul taught Andrew Rawnsley at 'geek camp' and was a teacher at Oundle when Charles Moir was a pupil.

'After Cambridge, I became a physics teacher and I went to Kenya to teach. While I was away in Kenya electronics happened. When I got back in 1978 I found a school which did both electronics and computing: Oundle.

'Charles Moir was thick with a guy called John Coll. John was very involved in the specification of the BBC Micro computer working with the BBC on the Proton. John was the house-master in Charles's house and obviously chatted to Charles. So Charles was able to get going even before Acorn. Charles got his *Wordwise* ROM out before Acorn got *View* going and then there was a *View/Wordwise* battle.'

The rest, as they say, is Acorn history.

Jill Regan

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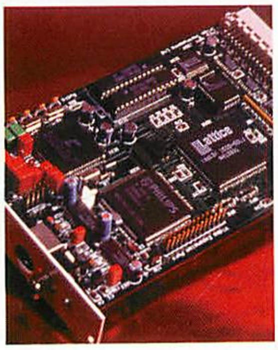




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